OWNER'S OPERATING MANUAL

PlasmaWall™

PL-61cx

Flat Panel Display Monitor &
Pixel-For-Pixel™ Controller with Vivix™ Technology

RUNCO

THE WORLD'S FINEST HOME THEATER PRODUCTS™

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Introduction

Introduction to the Runco PlasmaWall™ PL-61cx Plasma Display Monitor

The PL-61cx is a state-of-the-art DTV ready, flat-panel plasma display monitor. The 61-inch widescreen offers a resolution of 1365 x 768 with a 16:9 aspect ratio.

The PL-61cx is one of the few plasma display products capable of high altitude performance, being high altitude compliant to 9000 feet.

This model features an anti-glare filter to diffuse direct light sources, making images easier to view under adverse lighting conditions.

Runco includes its acclaimed Vivix™ PFP™ Controller with the PL-61cx. This Controller includes 3D scan conversion with motion compensation and 3:2 pulldown for excellent video performance with both video-based and film-based material.

In addition, multiple aspect ratio control includes Runco's Stadium mode to fill the 16:9 screen with standard 4:3 images without loss of picture quality.

The PL-61cx has been carefully engineered for superb video performance. Its advanced design accommodates custom installation and every day operation with ease. At less than 5 inches thin it can be wall-mounted or used on a table top stand.

The features you'll enjoy include:

• Fully integrated system, with the Controller being the control center for the system. All automation controls need only be connected to the Controller; no need to control the plasma separately.
• 1366 x 768 DTV resolution with 16:9 aspect ratio
• High altitude compliant to 9000 feet
• Designed for custom automation control with RS-232C and IR interface
• Accepts all DTV formats - HDTV compatible
• Multiple aspect ratio control
• Less than 5 inches thin
• Digital input via DVI

Contents of the package:

• PL-61cx Plasma monitor
• PFP™ Controller
• Power cord
• Remote control with two AAA batteries
• User's manual
• Safety metal fittings*
• Screws for safety metal fittings*
• Ferrite core (small x 2. large x 2), bands
• Cable clamps

* These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the tablestand (optional). Fasten the safety fittings to the holes in the back of the plasma using the safety fitting mount screws.

Options:

• Wall mount unit
• Tilt mount unit
• Tablestand

Important Information

Precautions

Please read this manual carefully before using your plasma monitor and keep the manual handy for future reference.

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

WARNING

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS, UNLESS THE PRONGS CAN BE FULLY INSERTED. REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH-VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Warnings and Safety Precaution

This plasma monitor is designed and manufactured to provide long, trouble-free service. No maintenance other than cleaning is required. Please see the section "Plasma monitor cleaning procedure" on the next page.

The plasma display panel consists of fine picture elements (cells) with more than 99.99 percent active cells. There may be some cells that do not produce light or remain lit.

For operating safety and to avoid damage to the unit, read carefully and observe the following instructions. To avoid shock and fire hazards:

1. Provide adequate space for ventilation to avoid internal heat build-up. Do not cover rear vents or install the unit in a closed cabinet or shelves.
   If you install the unit in an enclosure, make sure there is adequate space at the top of the unit to allow hot air to rise and escape. If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location, and wait for 60 minutes to cool the monitor. If the problem persists, contact your dealer for service.
2. Do not use this unit's polarized plug with extension cords or outlets unless the prongs can be completely inserted.
3. Do not expose the unit to water or moisture.
4. Avoid damage to the power cord, and do not attempt to modify the power cord.
5. Unplug the power cord during electrical storms or if the unit will not be used over a long period.
6. Do not open the cabinet which has potentially dangerous high voltage components inside. If the unit is damaged in this way the warranty will be void. Moreover, there is a serious risk of electric shock.
7. Do not attempt to service or repair the unit. The manufacturer is not liable for any bodily harm or damage caused if unqualified persons attempt service or open the back cover. Refer all service to authorized Service Centers.

To avoid damage and prolong operating life:

1. Use only with 120V 50/60Hz AC power supply. Continued operation at line voltages greater than 120 Volts AC will shorten the life of the unit, and might even cause a fire hazard.
2. Handle the unit carefully when installing it and do not drop.
3. Set the unit away from heat, excessive dust, and direct sunlight.
4. Protect the inside of the unit from liquids and small metal objects. In case of accident, unplug the power cord and have it serviced by an authorized Service Center.
5. Do not hit or scratch the panel surface as this causes flaws on the surface of the screen.
6. For correct installation and mounting it is strongly recommended to use a trained, authorized dealer.
7. As is the case with any phosphor-based display (like a CRT monitor, for example) light output will gradually decrease over the life of a Plasma Display Panel.
8. To avoid sulfurization it is strongly recommended not to place the unit in a dressing room in a public bath or hot spring bath.

Plasma monitor cleaning procedure:

1. Use a soft dry cloth to clean the front panel and bezel area. Never use solvents such as alcohol or thinner to clean these surfaces.
2. Clean plasma ventilation areas with a vacuum cleaner with a soft brush nozzle attachment.
3. To ensure proper ventilation, cleaning of the ventilation areas must be carried out monthly. More frequent cleaning may be necessary depending on the environment in which the plasma monitor is installed.

Recommendations to avoid or minimize phosphor burn-in:

Like all phosphor-based display devices and all other gas plasma displays, plasma monitors can be susceptible to phosphor burn under certain circumstances. Certain operating conditions, such as the continuous display of a static image over a prolonged period of time, can result in phosphor burn if proper precautions are not taken. To protect your investment in this plasma monitor, please adhere to the following guidelines and recommendations for minimizing the occurrence of image burn:

* Always enable and use your computer's screen saver function during use with a computer input source.
* Display a moving image whenever possible.
* Change the position of the menu display from time to time.
* Always power down the monitor when you are finished using it.

If the plasma monitor is in long term use or continuous operation take the following measures to reduce the likelihood of phosphor burn:

* Lower the Brightness and Contrast levels as much as possible without impairing image readability.
* Display an image with many colors and color gradations (i.e. photographic or photo-realistic images).
* Create image content with minimal contrast between light and dark areas, for example white characters on black backgrounds. Use complementary or pastel color whenever possible.
* Avoid displaying images with few colors and distinct, sharply defined borders between colors.

* ***Note:*** Burn-in is not covered by the warranty.

Contact your dealer for other recommended procedures that will best suit your particular application needs.

THREE YEAR LIMITED WARRANTY

For Plasma Display Monitors

Congratulations on your purchase of a Runco video product and welcome to the Runco family! We believe Runco produces “The World’s Finest Home Theater Products”. With proper installation, setup and care, you should enjoy many years of unparalleled video performance.

This is a LIMITED WARRANTY as defined in the Magnuson-Moss Warranty Act. Please read it carefully and retain it with your other important documents.

WHAT IS COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY:

SERVICE LABOR: Runco will pay for service labor by a Runco Authorized Service Center when needed as a result of a manufacturing defect for a period of three (3) years from the effective date of delivery to the end user (excluding the plasma glass panel).

PARTS: (Not including plasma glass panel) Runco will provide new or rebuilt replacement parts for the parts that fail due to defects in materials or workmanship for a period of three (3) years from the effective date of delivery to the end user. Such replacement parts are then subsequently warranted for the remaining portion (if any) of the original warranty period.

PLASMA GLASS PANEL: Runco will pay for service labor by a Runco Authorized Service Center when needed as a result of a manufacturing defect for a period of one (1) year from the effective date of delivery to the end user. In addition, Runco will provide new or rebuilt replacement parts for the parts that fail due to defects in materials or workmanship for a period of one (1) year from the effective date of delivery to the end user. Such replacement parts are then subsequently warranted for the remaining portion (if any) of the original warranty period.

WHAT IS NOT COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY:

Image burn-in on plasma display panels are specifically excluded from coverage under this Limited Warranty. Image burn-in is the result of misuse of the product and therefore cannot be repaired under the terms of this Limited Warranty.

TO AVOID IMAGE BURN-IN:
Please ensure that still images are left on your plasma display panel for no more than a few minutes. Also ensure that images displayed in the 4:3 aspect ratio mode (black or gray stripes, but no picture information is present on the left and right edges of the screen) are used as infrequently as possible. This will prevent permanent image burns on your plasma display panel, which can be seen permanently under certain conditions once burn-in has occurred.

The types of images to avoid include video games, still images and computer screens with stationary tool bars and icons. (This is why computers are equipped with screen savers – to prevent still images from burning into the monitor’s phosphors after being displayed continuously for an extended period of time).

Normal viewing material such as television/satellite broadcasts, videotape or DVDs (not put into pause for extended periods of time) will not cause damage to your display under normal conditions. Many DVD players are also equipped with screen savers for this reason.

This Limited Warranty only covers failure due to defects in materials and workmanship that occur during normal use and does not cover normal maintenance. This Limited Warranty does not cover cabinets or any appearance items; failure resulting from accident, misuse, abuse, neglect, mishandling, misapplication, faulty or improper installation or setup adjustments; improper maintenance, alteration, improper use of any input signal; damage due to lightning or power line surges, spikes and brownouts; damage that occurs during shipping or transit; or damage that is attributed to acts of God. In the case of remote control units, damage resulting from leaking, old, damaged or improper batteries is also excluded from coverage under this Limited Warranty.

CAUTION: THIS LIMITED WARRANTY ONLY COVERS RUNCO PRODUCTS PURCHASED FROM AND INSTALLED BY RUNCO AUTHORIZED DEALERS. ALL OTHER PRODUCTS ARE SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY. MOREOVER, DAMAGE RESULTING DIRECTLY OR INDIRECTLY FROM IMPROPER INSTALLATION OR SETUP IS SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY.

RIGHTS, LIMITS AND EXCLUSIONS:

Runco limits its obligations under any implied warranties under state laws to a period not to exceed the warranty period. There are no express warranties. Runco also excludes any obligation on its part for incidental or consequential damages related to the failure of this product to function properly. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. So the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

EFFECTIVE WARRANTY DATE:

This warranty begins on the effective date of delivery to the end user. For your convenience, keep the original bill of sale as evidence of the purchase date.

IMPORTANT: WARRANTY REGISTRATION:

Please fill out and mail your warranty registration card. It is imperative that Runco knows how to reach you promptly if we should discover a safety problem or product update for which you must be notified.

CONTACT A RUNCO AUTHORIZED SERVICE CENTER TO OBTAIN SERVICE

Repairs made under the terms of this Limited Warranty covering your Runco video product will be performed at the location of the product, during usual working hours, providing location of product is within normal operating distance from a Runco Authorized Service Center. In some instances it may be necessary for the product to be returned to the Runco factory for repairs. If, solely in Runco's judgment, location of product to be repaired is beyond normal operating distance of the closest Runco Authorized Service Center, or the repair requires the unit be returned to the Runco factory, it is the owner's responsibility to arrange for shipment of the product for repair. These arrangements must be made through the selling Runco Dealer. If this is not possible, contact Runco directly and we will locate an authorized representative to assist in the return of your product to Runco. Runco will return product transportation prepaid in the United States, unless no product defect is discovered. In that instance, shipping costs will be the responsibility of the owner.

ADDITIONAL INFORMATION:
To locate the name and address of the nearest Runco Authorized Service Center, or for additional information about this Limited Warranty, please call or write:

RUNCO INTERNATIONAL
Attn: Customer Service Department
2900 Faber Street
Union City, CA 94587
Ph: (510) 324-7777
Fax: (510) 324-9300

TWO YEAR LIMITED WARRANTY

For Projectors, Video Processors and Controllers

Congratulations on your purchase of a Runco video product and welcome to the Runco family! We believe Runco produces “The World’s Finest Home Theater Products”. With proper installation, setup and care, you should enjoy many years of unparalleled video performance.

This is a LIMITED WARRANTY as defined in the Magnuson-Moss Warranty Act. Please read it carefully and retain it with your other important documents.

WHAT IS COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY:

SERVICE LABOR: Runco will pay for service labor by a Runco Authorized Service Center when needed as a result of manufacturing defect for a period of two (2) years from the effective date of delivery to the end user (excluding the lamp).

PARTS: (Not including the lamp) Runco will provide new or rebuilt replacement parts for the parts that fail due to defects in materials or workmanship for a period of two (2) years from the effective date of delivery to the end user. Such replacement parts are then subsequently warranted for the remaining portion (if any) of the original warranty period.

PROJECTOR LAMP: Runco will pay for service labor by a Runco Authorized Service Center when needed as a result of a manufacturing defect for a period of six (6) months or 1000 hours, which ever comes first, from the effective date of delivery to the end user. In addition, Runco will provide a new or rebuilt replacement lamp for the lamp that fails due to defects in materials or workmanship for a period of six (6) months or 1000 hours, which ever comes first, from the effective date of delivery to the end user. Such replacement lamps are then subsequently warranted for the remaining portion (if any) of the original warranty period.

WHAT IS NOT COVERED UNDER THE TERMS OF THIS LIMITED WARRANTY:

Image burn-in on CRT projectors are specifically excluded from coverage under this Limited Warranty. Image burn-in is the result of misuse of the product and therefore cannot be repaired under the terms of this Limited Warranty.

TO AVOID IMAGE BURN-IN:
Please ensure that still images are left on your CRT projector for no more than a few minutes. Also ensure that images displayed in the 4:3 aspect ratio mode (black or gray stripes, but no picture information is present on the left and right edges of the screen) are used as infrequently as possible. This will prevent permanent image burns on your CRT projector, which can be seen permanently under certain conditions once burn-in has occurred.

The types of images to avoid include video games, still images and computer screens with stationary tool bars and icons. (This is why computers are equipped with screen savers – to prevent still images from burning into the monitor’s phosphors after being displayed continuously for an extended period of time).

Normal viewing material such as television/satellite broadcasts, videotape or DVDs (not put into pause for extended periods of time) will not cause damage to your display under normal conditions. Many DVD players are also equipped with screen savers for this reason.

This Limited Warranty only covers failure due to defects in materials and workmanship that occur during normal use and does not cover normal maintenance. This Limited Warranty does not cover cabinets or any appearance items; failure resulting from accident, misuse, abuse, neglect, mishandling, misapplication, faulty or improper installation or setup adjustments; improper maintenance, alteration, improper use of any input signal; damage due to lightning or power line surges, spikes and brownouts; damage that occurs during shipping or transit; or damage that is attributed to acts of God. In the case of remote control units, damage resulting from leaking, old, damaged or improper batteries is also excluded from coverage under this Limited Warranty.

CAUTION: THIS LIMITED WARRANTY ONLY COVERS RUNCO PRODUCTS PURCHASED FROM RUNCO AUTHORIZED DEALERS. ALL OTHER PRODUCTS ARE SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY. MOREOVER, DAMAGE RESULTING DIRECTLY OR INDIRECTLY FROM IMPROPER INSTALLATION OR SETUP IS SPECIFICALLY EXCLUDED FROM COVERAGE UNDER THIS LIMITED WARRANTY.

RIGHTS, LIMITS AND EXCLUSIONS:

Runco limits its obligations under any implied warranties under state laws to a period not to exceed the warranty period. There are no express warranties. Runco also excludes any obligation on its part for incidental or consequential damages related to the failure of this product to function properly. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages. So the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

EFFECTIVE WARRANTY DATE:

This warranty begins on the effective date of delivery to the end user. For your convenience, keep the original bill of sale as evidence of the purchase date.

IMPORTANT: WARRANTY REGISTRATION:

Please fill out and mail your warranty registration card. It is imperative that Runco knows how to reach you promptly if we should discover a safety problem or product update for which you must be notified.

CONTACT A RUNCO AUTHORIZED SERVICE CENTER TO OBTAIN SERVICE

Repairs made under the terms of this Limited Warranty covering your Runco video product will be performed at the location of the product, during usual working hours, providing location of product is within normal operating distance from a Runco Authorized Service Center. In some instances it may be necessary for the product to be returned to the Runco factory for repairs. If, solely in Runco's judgment, location of product to be repaired is beyond normal operating distance of the closest Runco Authorized Service Center, or the repair requires the unit be returned to the Runco factory, it is the owner's responsibility to arrange for shipment of the product for repair. These arrangements must be made through the selling Runco Dealer. If this is not possible, contact Runco directly for a Return Authorization number and shipping instructions. Runco will return product transportation prepaid in the United States, unless no product defect is discovered. In that instance, shipping costs will be the responsibility of the owner.

ADDITIONAL INFORMATION:
To locate the name and address of the nearest Runco Authorized Service Center, or for additional information about this Limited Warranty, please call or write:

RUNCO INTERNATIONAL
Attn: Customer Service Department
2900 Faber Street
Union City, CA 94587
Ph: (510) 324-7777
Fax: (510) 324-9300

How to Attach Options to the Plasma Monitor

You can attach your optional mounts or stand to the plasma monitor in one of the following two ways:

1) While it is upright. (See drawing A)

2) As it is laid down with the screen face down (See drawing B). Lay the protective sheet, which was wrapped around the plasma monitor when it was packaged, beneath the screen surface so it does not scratch the screen face.

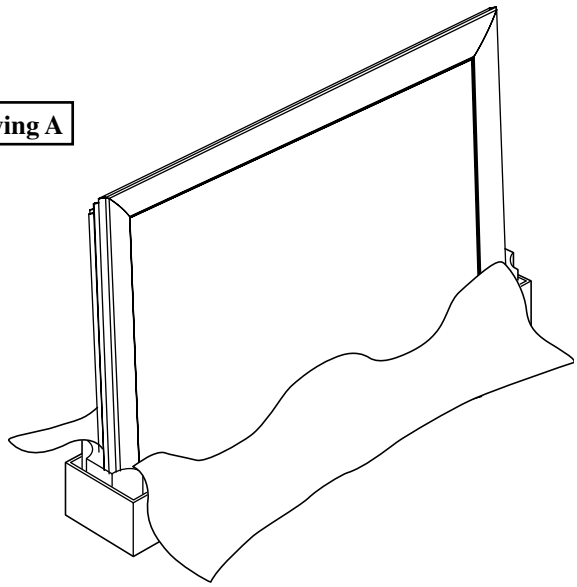
* DO NOT touch or hold the screen face when carrying the unit.

• This device cannot be installed on its own. Be sure to use a stand or original mounting unit. (Wall mount unit, stand, etc.)

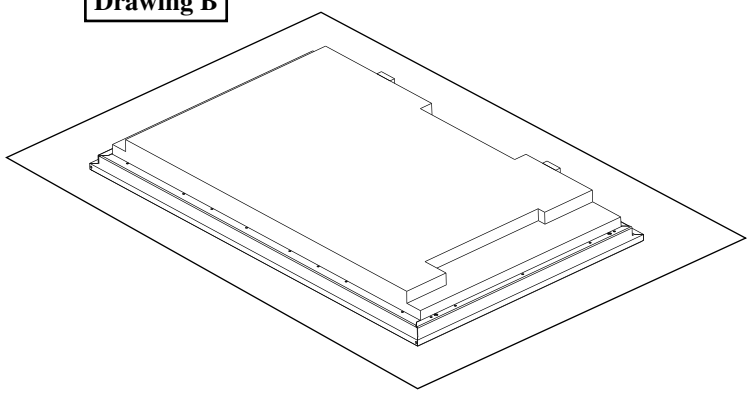
• For correct installation and mounting it is required to use a trained, Runco Authorized Dealer. Failure to follow correct mounting procedures could result in damage to the equipment or injury to the installer. Product warranty does not cover damage caused by improper installation.

Use only the mounting kit or stand provided by maufacturer and listed under options.

Drawing A

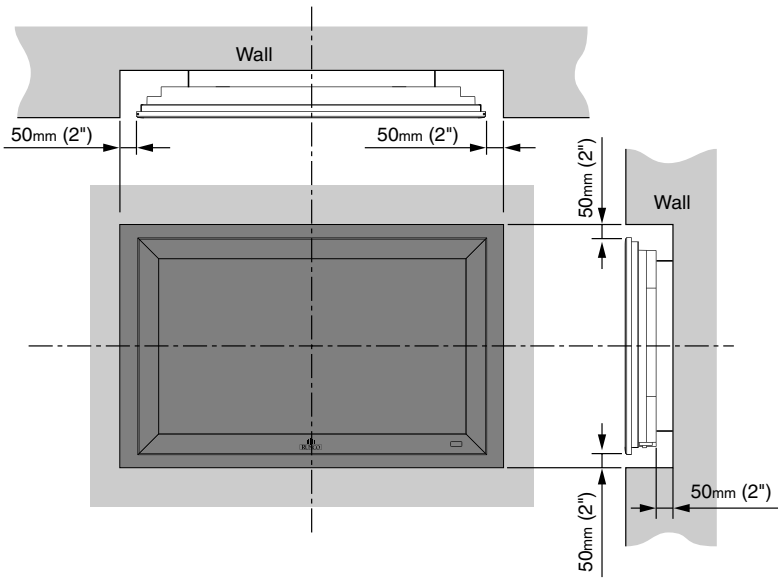


Drawing B



Ventilation Requirements for enclosure mounting

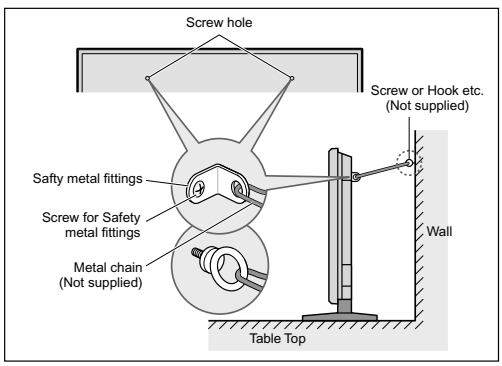
To allow heat to dispearse, leave space between surrounding objects as shown on the diagram to the right when installing.



How to use the safety metal fittings and the screws for safety metal fittings

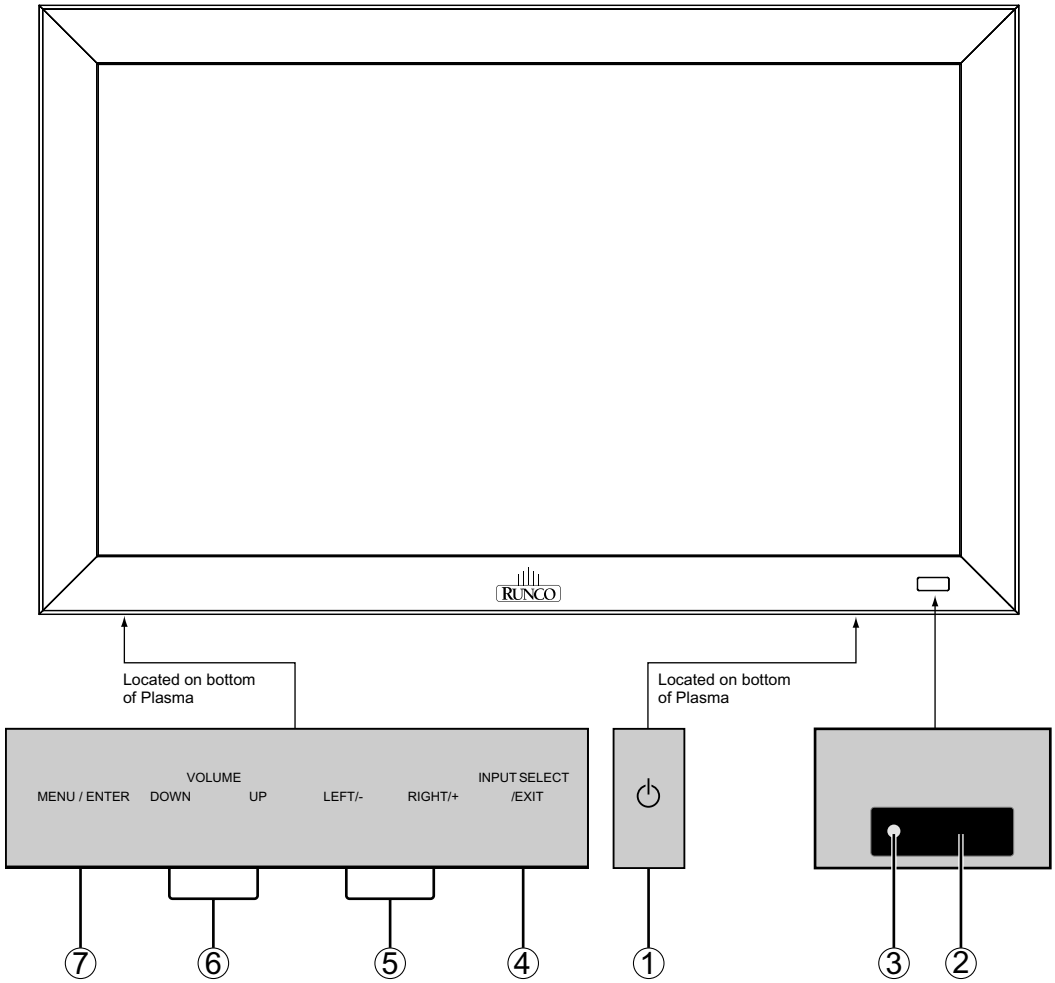
These are fittings for fastening the unit to a wall to prevent tipping due to external shock when using the stand (optional). Fasten the safety fittings to the holes in the back of the monitor using the safety fitting mount screws.

* Safety metal fittings will differ according to the model.



Part Names and Function

Front View



1 POWER
Turns the plasma monitor's power on and off.

2 Remote sensor window
Receives the signals from the remote control.

3 POWER / STANDBY indicator
When the power is on it will light GREEN.
When the power is in the standby mode, it will light RED.

4 INPUT SELECT / EXIT
Switches the input, in the following order.
The available inputs depend on the setting of "BNC INPUT".

RGB: VIDEO1 → VIDEO2 → VIDEO3 → HD/DVD/DTV → RGB/PC1 → RGB/PC2 → RGB/PC3 →

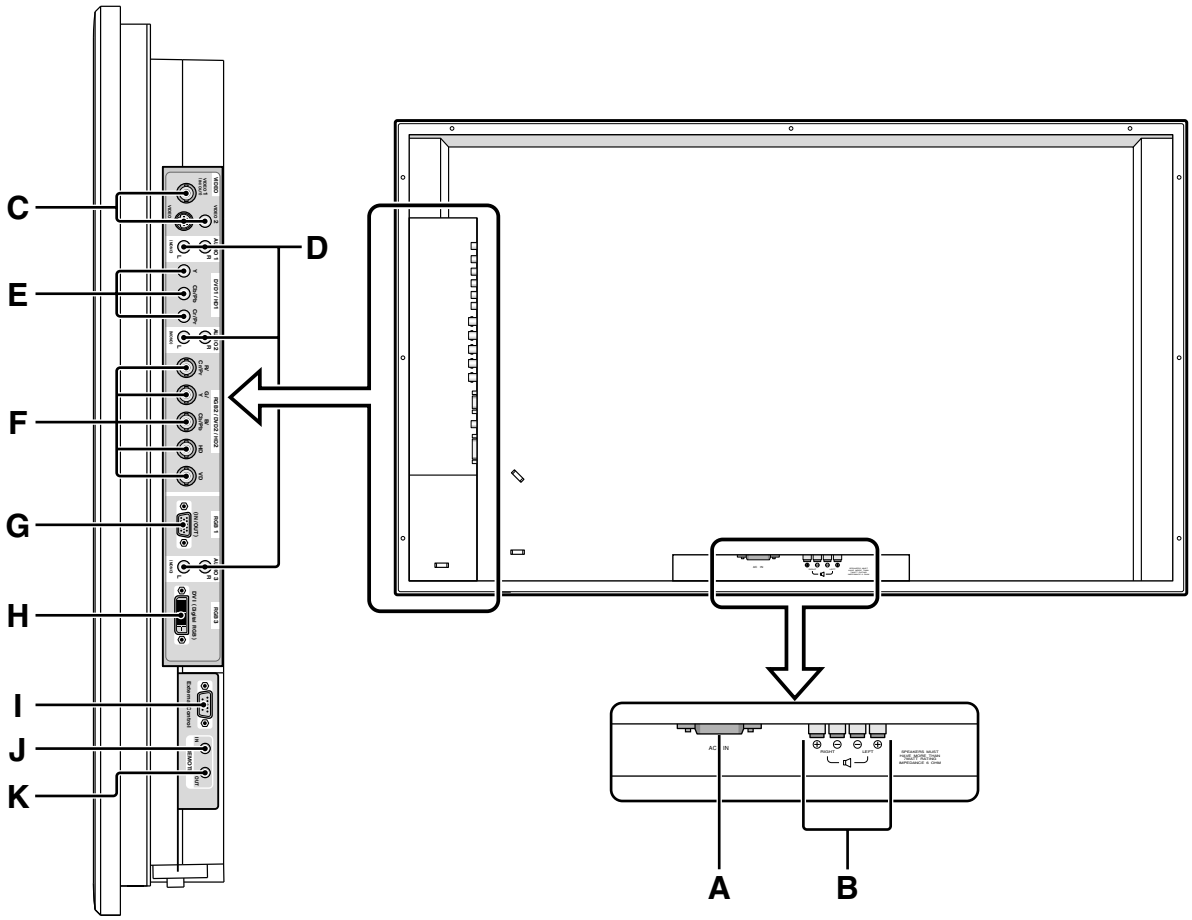
COMP: VIDEO1 → VIDEO2 → VIDEO3 → HD1/DVD1/DTV1 → HD2/DVD2/DTV2 → RGB/PC1 → RGB/PC2 →

5 LEFT/- and RIGHT/+
Enlarges or reduces the image. Functions as the CURSOR (◀ / ▶) buttons in the On-Screen Menu (OSM) mode.

6 VOLUME DOWN and UP
Adjusts the volume. Functions as the CURSOR (▲ / ▼) buttons in the On-Screen Menu mode.

7 MENU/ENTER
Sets the On-Screen Menu mode and displays the main menu.

Rear View / Terminal Board



A AC IN
Connect the included power cord here.

B Connect speakers (optional) here. Maintain the correct polarity. Please refer to your speaker's owner's manual.

C VIDEO 1,2,3 (BNC, RCA, S-Video)
Connect VCR's, DVD's or VIdeo Cameras, etc here. VIDEO1 can be used for INPUT or OUTPUT.

D AUDIO1, AUDIO2, AUDIO3
These are audio input terminals. The input is selectable. Set which video image to distribute them from the audio menu screen.

E DVD1 / HD1
Connect DVD's, High Definition or Laser Discs, etc here.

F RGB2 / DVD2 / HD2
RGB2: Connect an analog RGB signal and the synchronization signal.
DVD2 / HD2: Connect DVD's, High Definition sources, Laser Discs, etc. here. This input can be set for use with an RGB or Component source.

G RGB1 (mini D-Sub 15pin)
Connect an analog RGB signal from a computer, etc. here. This input can be used for Input or Output.

H RGB3 (DVI 24pin)
Connect a digital signal (TMDS) from a source with a DVI output.

I EXTERNAL CONTROL
This terminal is used when operating and controlling the monitor externally by RS-232.

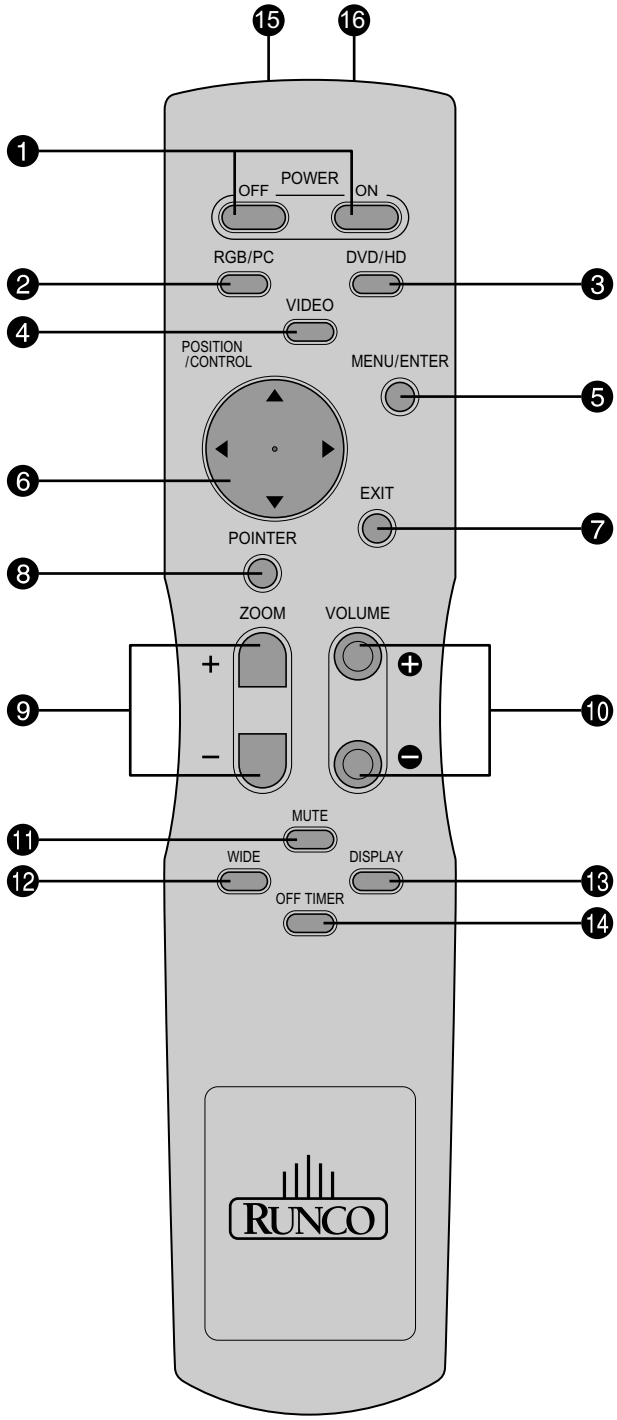
J REMOTE IN
Connect the remote cable* to the remote control's remote jack to obtain wired remote control).

K REMOTE OUT
Connect the remote cable* to the REMOTE IN jack of the other display monitor to obtain wired remote control.

* The 1/8 Stereo Mini cable must be purchased separately.

Installation Remote Control

(Not needed for normal use. Please use the Controller's remote for normal operation.)



❶ POWER ON/OFF
Switches Power ON/OFF.
(This does not operate when POWER/STANDBY indicator of the main unit is off.)

❷ RGB/PC
Press this button to select RGB/PC as the source.
The available sources depend on the setting of "BNC INPUT".
RGB: ↱ RGB/PC1 → RGB/PC2 → RGB/PC3 ┐
COMP. : ↱ RGB/PC1 → RGB/PC3 ┐

RGB/PC can also be selected using the INPUT SELECT button on the monitor.

❸ DVD / HD
Press this button to select DVD/HD as the source.
The available sources depend on the setting of "BNC INPUT".
RGB: HD/DVD/DTV
COMP.: ↱ HD1/DVD1/DTV1 → HD2/DVD2/DTV2 ┐

DVD/HD can also be selected using the INPUT SELECT button on the monitor.

❹ VIDEO
Press this button to select VIDEO as the source.
↱ VIDEO1 → VIDEO2 → VIDEO3 ┐

VIDEO can also be selected using the INPUT SELECT button on the monitor.

❺ MENU/ENTER
Press this button to access the OSM controls.
Press this button during the display of the main menu to go to the sub menu.

❻ CURSOR (▲ / ▼ / ◀ / ▶)
Use these buttons to select items or settings and to adjust settings or switch the display patterns.

❼ EXIT
Press this button to exit the OSM controls in the main menu. Press this button during the display of the sub menu to return to the previous menu.

❽ POINTER
Press this button to display the pointer.

❾ ZOOM (+ /–)
Enlarges or reduces the image.

❿ VOLUME (+ /–)
Adjusts the audio volume.

⓫ MUTE
Mutes the sound.

⓬ WIDE
Automatically detects the signal and sets the aspect ratio.
Wide button is not active for all signals.

⓭ DISPLAY
Displays the source settings on the screen.

⓮ OFF TIMER
Activates the off timer for the unit.

⓯ REMOTE CONTROL SIGNAL TRANSMITTER
Transmits the remote control signals.

⓰ REMOTE JACK
Insert the plug of the remote cable (The 1/8 Stereo Mini cable) here when using the supplied remote control in the wired condition.

Use of Installation Remote Control

The Installation remote has been included with the PL-61cx in order to allow the adjustment of size and position for HDTV signals, or any other high-resolution signal sent into the “HDTV/Computer” port on the Controller.

Do not use this remote to make color balance adjustments or any other image quality adjustments to the plasma itself. All image quality adjustments are stored in the PFP Controller, NOT in the plasma. Any adjustments made to the plasma will not be stored and will be lost when the plasma is turned off.

To adjust position or size for high-definition signals, perform the following:

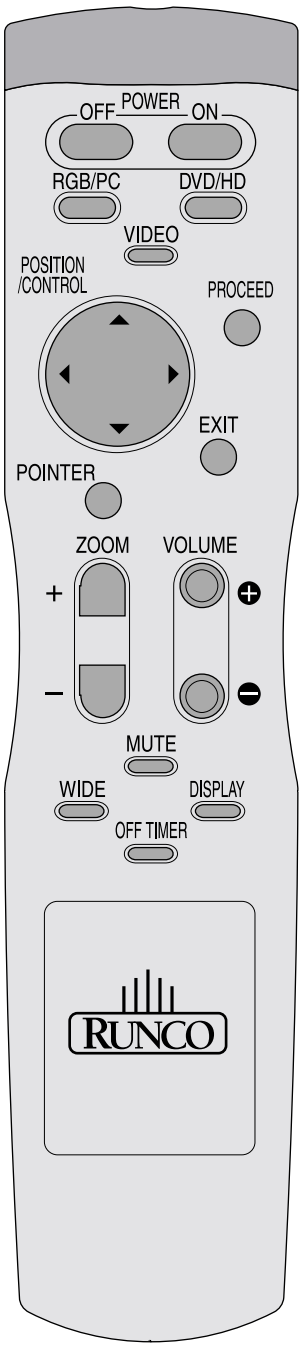
1. Press **PROCEED**.

2. Press the **DOWN ARROW** twice so “SCREEN” is highlighted and press **PROCEED**.

3. Select either V or H POSITION, V HEIGHT or H WIDTH as desired, and press **PROCEED**.

4. Using the arrow buttons, adjust the position or size as necessary.

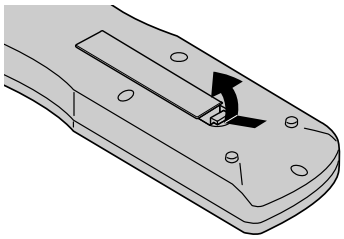
5. When done, press **EXIT** several times until the menu disappears.



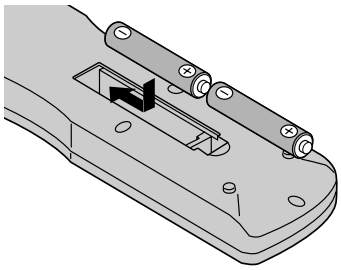
Battery Installation and Replacement

Insert the 2 “AAA” batteries, making sure to set them in with the proper polarity.

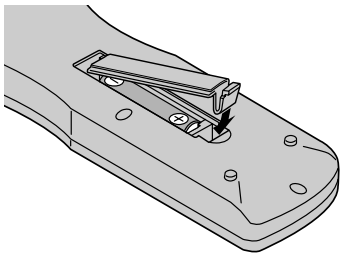
1. Press and open the cover.



2. Align the batteries according to the (+) and (–) indication inside the case.

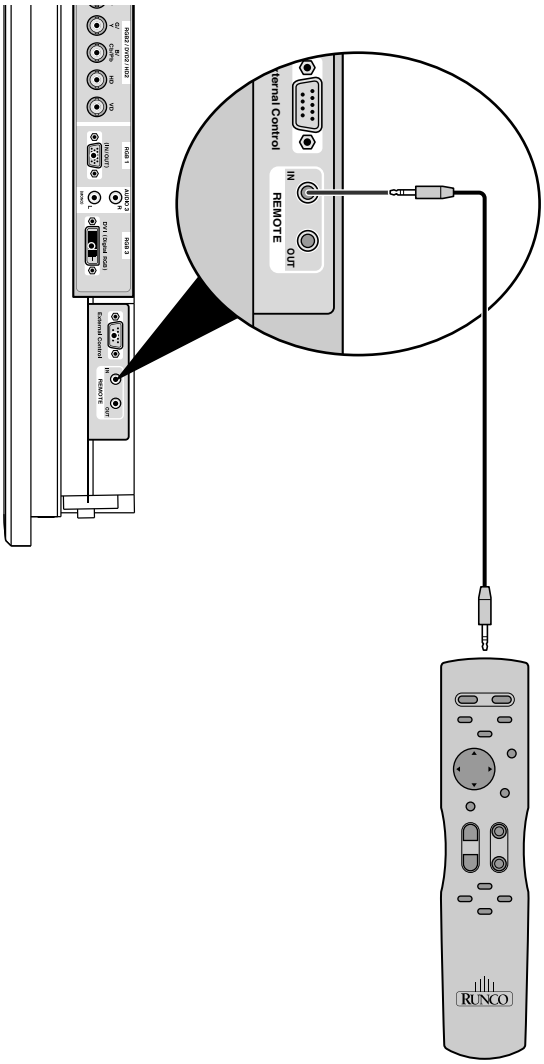


3. Replace the cover.



Using the wired remote control mode

Connect the remote cable* to the remote control's remote jack and the "REMOTE IN" terminal on the monitor. When the cable is connected, the mode automatically switches to wired remote control. When the wired remote control is used, the remote control can be operated even if no batteries are loaded.

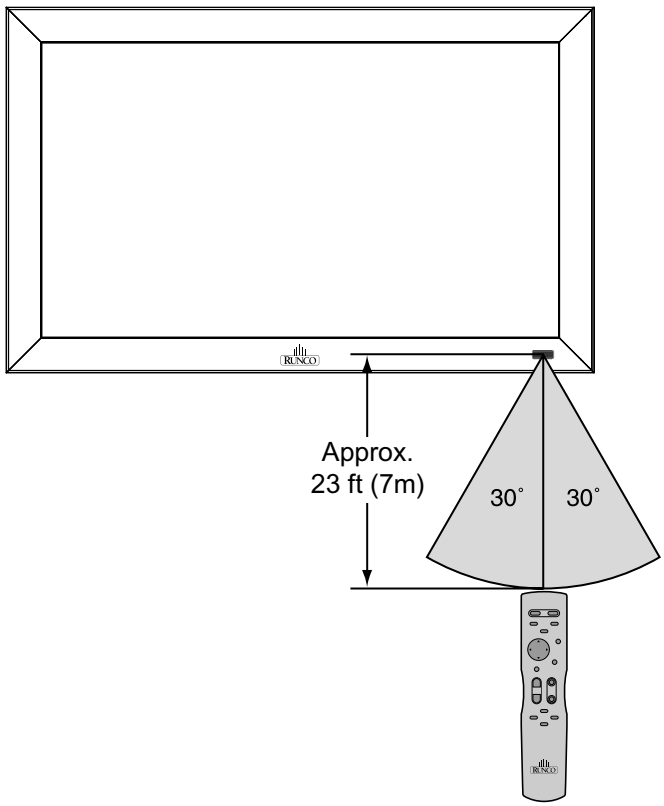


*The 1/8 Stereo Mini cable must be purchased separeately.

Operating Range

* Use the remote control within a distance of about 23 ft. (7m) from the front of the monitor's remote control sensor and at horizontal an vertical angles of up to approximately 30°.

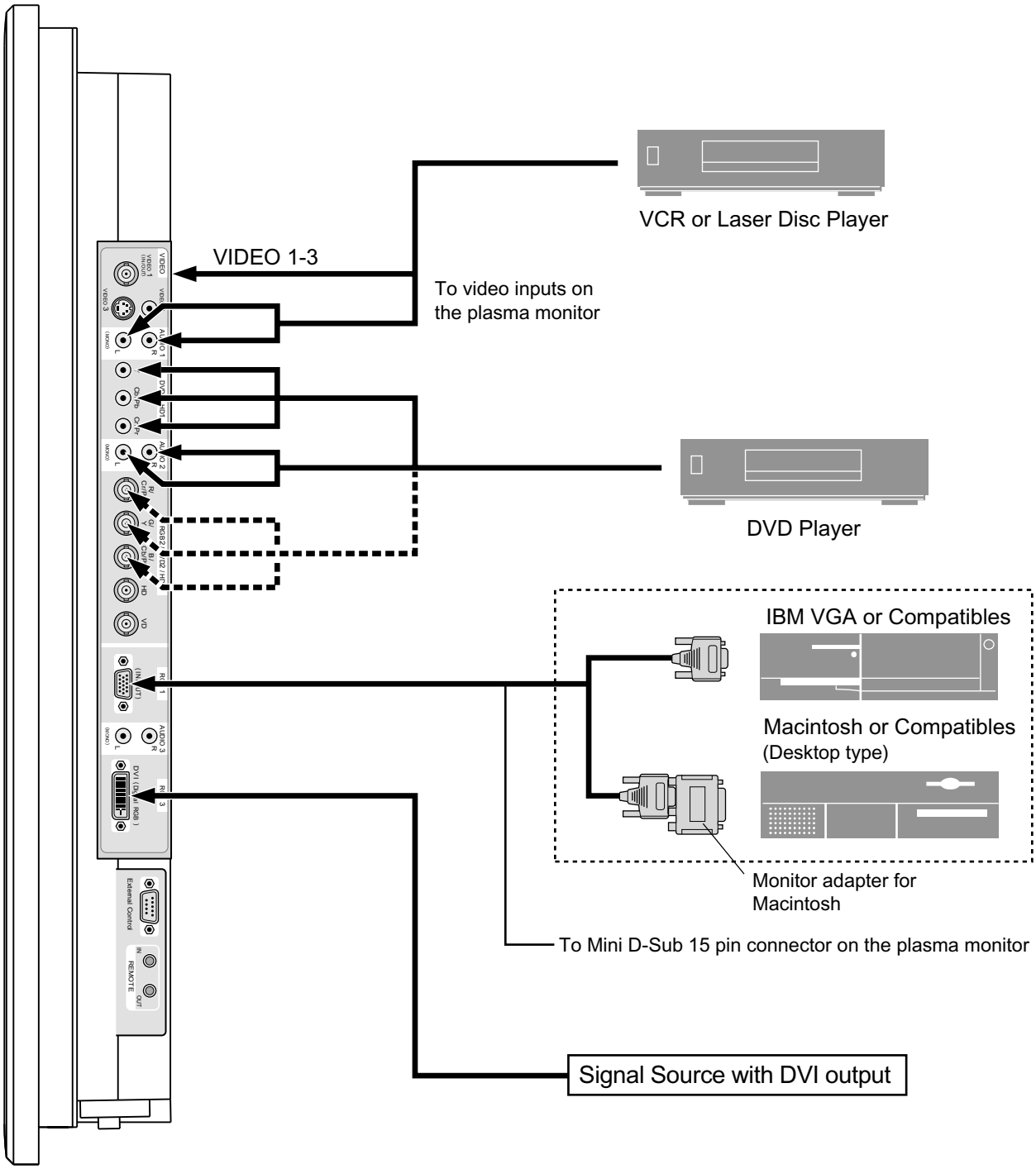
* The remote control operation may not function if the monitor's remote control sensor is exposed to direct sunlight or strong artificial light, or if there is an obstacle between the sensor and the remote control.



Handling the remote control

- Do not drop or mishandle the remote control.
- Do not get the remote control wet. If the remote control gets wet, wipe it dry immediately.
- Avoid heat and humidity.
- When not using the remote control for a long period, remove the batteries.
- Do not use new and old batteries together, or use different types together.
- Do not take apart the batteries, heat them, or throw them into a fire.
- When using the remote control in the wireless condition, be sure to unplug the remote cable from the REMOTE IN terminal on the monitor.

Plasma Monitor Installation



Connecting Your PC or Macintosh Computer

Connecting your PC or Macintosh computer to your plasma monitor will enable you to display your computer's screen image for an impressive presentation. The plasma monitor supports the signals described on page 7 of Model Information.

To connect a PC, Macintosh or compatible graphics adapter, simply:

1. Turn off the power to your plasma monitor and computer.
2. If your PC does not support SXGA/XGA/SVGA/VGA you will need to install an SXGA/XGA/SVGA/VGA graphics board. Consult your computer's owner's manual for your SXGA/XGA/SVGA/VGA configuration. If you need to install a new board, see the manual that comes with your new graphics board for installation instructions.
3. This plasma monitor provides signal compatibility up to VESA 1600×1200 (UXGA). However, it is not recommended to use this resolution due to image readability on the monitor's native pixel resolution panel.
4. Use the signal cable to connect your PC or Macintosh computer to the plasma monitor. For Macintosh, use the monitor adapter to connect to your computer's video port, if necessary.
5. Turn on the plasma monitor and the computer.
6. If the plasma monitor goes blank after a period of inactivity, it may be caused by a screen saver installed on the computer you've connected to the plasma monitor.

When using a Macintosh with the plasma monitor, the following four display standards are supported using the Macintosh adapter :

13" fixed mode
16" fixed mode
19" fixed mode
21" fixed mode

The 19" fixed mode is recommended for your monitor.

Connections with Equipment that have a Digital Interface

Connections can be made with equipment that is equipped with a digital interface compliant with the DVI (Digital Visual Interface) standard.

* Use a DVI 24-pin signal cable and the ferrite cores (supplied) when making connections to the RGB3 (DVI) connector of the main unit.
  Note that the RGB3 (DVI) terminal does not support analog RGB input source.

Note:

1. *Input TMDS signals conforming to DVI standards. The TMDS input corresponds to 1 link.*
2. *To maintain display quality, use a cable with a quality prescribed by DVI standards that is within 5 meters in length.*

Connecting Your Document Camera

You can connect your plasma monitor to a document camera. To do so, simply:

1. Turn off the power to your plasma monitor and document camera.
2. Use a standard video cable to connect your document camera to the Video input on your plasma monitor.
3. Turn on the plasma monitor and the document camera.

Note: *Refer to your document camera owner's manual for more information about your camera's video output requirements.*

Connecting Your VCR or Laser Disc Player

Use common RCA cables (not provided) to connect your VCR or laser disc player to your plasma monitor. To make these connections, simply:

1. Turn off the power to your plasma monitor and VCR or laser disc player.
2. Connect one end of your RCA cable to the video output connector on the back of your VCR or laser disc player, connect the other end to the Video input on your plasma monitor. Use standard RCA audio patch cords to connect the audio from your VCR or laser disc player to your plasma monitor (if your VCR or laser disc player has this capability). Be careful to keep your right and left channel connections correct for stereo sound.
3. Turn on the plasma monitor and the VCR or laser disc player.

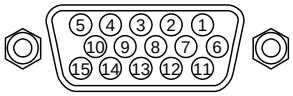
Note: *Refer to your VCR or laser disc player owner's manual for more information about your equipment's video output requirements.*

Connecting Your DVD Player

You can connect your plasma monitor to a DVD player. To do so, simply:

1. Turn off the power to your plasma monitor and DVD player.
2. Use a component video cable to connect your DVD player to the Y, Cb, and Cr inputs on your plasma monitor.
   Or use the DVD-player's S-Video output. Use a standard S-Video cable to connect to the S-Video input on the plasma monitor.
3. Turn on the plasma monitor and the DVD player.

Pin Assignments and Signal Levels for 15 pin RGB (Analog)

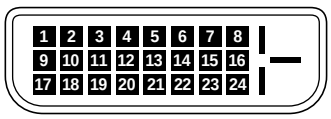


Pin No.	Signal (Analog)
1	Red
2	Green or sync-on-green
3	Blue
4	No connection
5	Ground
6	Red ground
7	Green ground
8	Blue ground
9	No connection
10	Sync signal ground
11	No connection
12	Bi-directional DATA (SDA)
13	Horizontal sync or Composite sync
14	Vertical sync
15	Data clock

Pin Configuration and Signal of the RGB 3 Connector (DVI Connector)

The unit is equipped with a type of connector commonly used for digital.
(This cannot be used for an analog input.)
(TMDS can be used for one link only.)

RGB 3



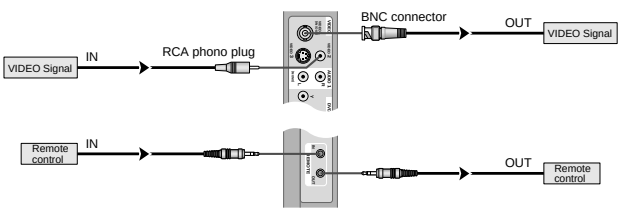
Pin No.	Signal (Digital)
1	T.M.D.S Data 2 -
2	T.M.D.S Data 2 +
3	T.M.D.S Data 2 Shield
4	No connection
5	No connection
6	DDC Clock
7	DDC Data
8	No connection
9	T.M.D.S Data 1 -
10	T.M.D.S Data 1 +
11	T.M.D.S Data 1 Shield
12	No connection
13	No connection
14	+5V Power
15	Ground
16	Hot Plug Detect
17	T.M.D.S Data 0 -
18	T.M.D.S Data 0 +
19	T.M.D.S Data 0 Shield
20	No connection
21	No connection
22	T.M.D.S Clock Shield
23	T.M.D.S Clock +
24	T.M.D.S Clock -

Creating a video wall

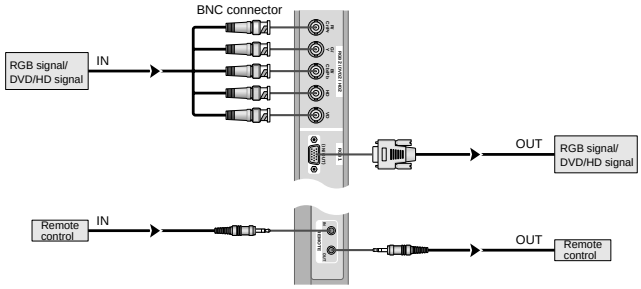
With buit-in matrix display capability, you can create a 2×2 or 3×3 video wall.

• Connect signal cables and remote cables as shown below.

Video signal



RGB/DVD/HD signal



Note:

1. *The VIDEO1 and RGB1 terminals can be used for either INPUT or OUTPUT. When LOOP OUT is ON, do not connect an OUTPUT signal from another unit, that will place an extraordinary load on the other unit and may damage it.*
2. *LOOP OUT can not be turned ON while signals are input to RGB1 terminal.*
3. *LOOP OUT can be turned ON while signals are input to RGB1 terminal if the POWER is switched ON.*

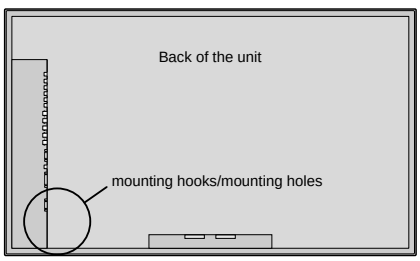
Information

- To loop signals out to another plasma display, set the LOOP OUT to ON.
- To create a video wall, set the VIDEO WALL menu items properly.
- To connect monitors, please use a 1~2m (3.3~6.6 feet) BNC cable (any commercially available cable).
- If the image quality is poor, do not use the monitor's out terminal. Use a distribution amplifier (any commercially available distribution amplifier) to connect the split signals to the respective monitor INPUT terminals.
- Being used as a video wall function, maximaly 4-screen is rough-standard with lower than 1024×768, 60Hz signal.
- A distribution amplifier is particularly recommended when using a 9-screen video wall.
- From the second monitor onward, connections require a BNC-RCA conversion cable or connector, a mini D-Sub 15 pin cable-BNC (×5) cable or a conversion connector.

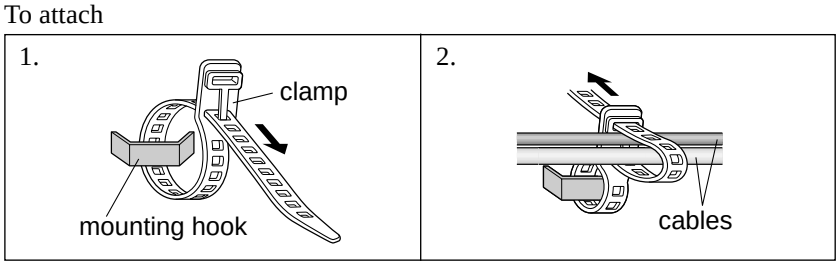
Cable Management

Using the cable clamps provided with the plasma display, bundle at the back of the unit the signal and audio cables connected to the display.

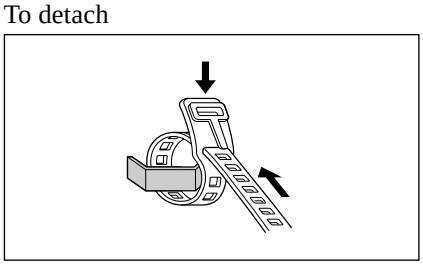
* The cable clamp will differ according to the model.



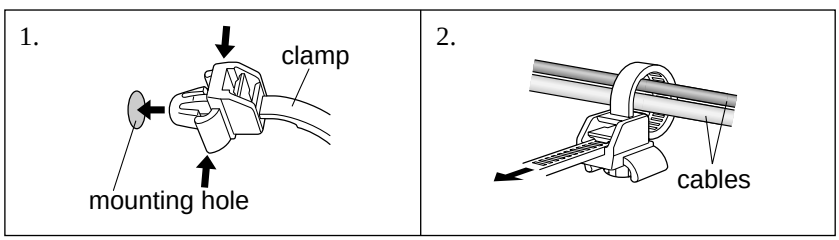
To attach



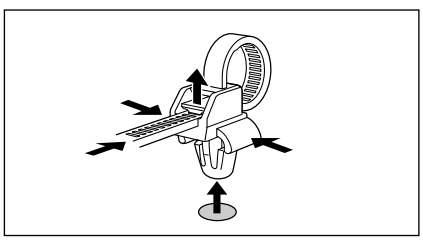
To detach



To attach



To detach



PFP™ Controller Installation & Overall Description

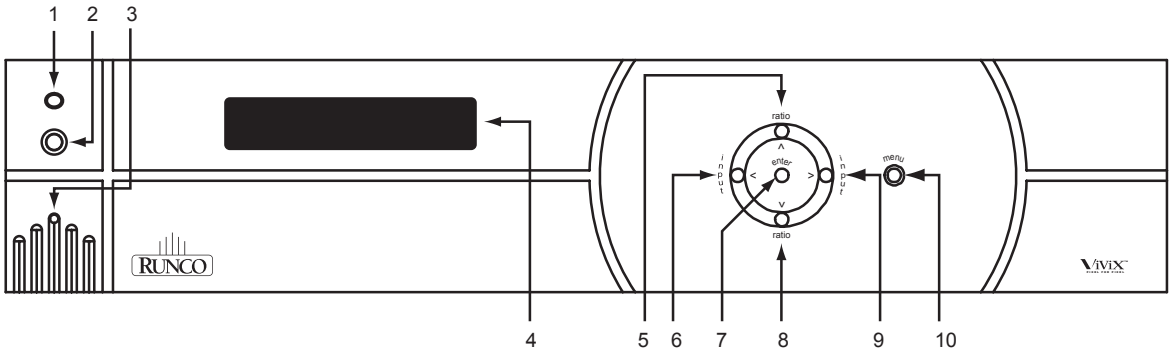
The **PL-61cx system** consists of the **PFP Controller** and the **PL-61cx Plasma monitor**. This system is unique in the way it is controlled; the control center for this system is located within the PFP™ Controller. The Controller tells the Plasma to turn on or off, controls its brightness, contrast, color temperature and more. All of this is accomplished by Runco's unique ComLink, which is the transfer of information between the Controller and the Plasma via their ComLink ports (on an RJ-11 cable). Therefore, only the PFP™ Controller's remote control is necessary to control all aspects of this system. In a nutshell, this is a fully integrated video display system, of which its components all work together to bring you the video quality and functionality needed in a quality home theater.

Besides being the system's control center, the PFP Controller is also a high-quality scaler, which outputs all signals in the native resolution of the PL-61cx Plasma monitor. The Composite, S-video and Component (non-progressive) signals are sent through the PFP™ Controller's 10-bit decoder, de-interlaced then scaled to the native resolution of the Plasma. This method of scaling is the most efficient and provides the best results since the Plasma does not have to do any 're-scaling'.

In the next chapter, the menu system will be described in detail. There are many adjustments available to perfect the PL-61cx's image, including typical 'front-panel controls' as well as color temperature and other image-quality controls.

PFP™ Controller Description

Front Panel



1. IR RECEIVER
Receives the infrared signal from the remote control.

2. POWER BUTTON
Turns the unit ON or OFF. The Main Power switch on the rear of the unit must be on first for this button to be active.

3. POWER INDICATOR
When the PFP Controller is ON, this LED will illuminate GREEN. When the unit is OFF or in STANDBY, this LED will illuminate RED. A flashing red light indicates a fault. If this happens, unplug the unit for 2 minutes and re-try. A yellow LED indicates a communication problem; double check that the ComLink cable is connected properly.

4. LED DISPLAY
Indicates the model number, current source, resolution and aspect ratio.

5. UP BUTTON
When no menu is present on-screen, this button will toggle you through the different aspect ratios.
When the menu is on-screen, the UP button will move the cursor up within a menu.
When an adjustment item has been selected (i.e. brightness), the UP button will increase the value of that function.

6. LEFT BUTTON
When no menu is present on-screen, the LEFT button will toggle you through the five different sources, in the order of:

RGB HD ⟶ Component HD ⟶ Component ⟶ S-Video ⟶ Composite

7. ENTER BUTTON
When an item is highlighted on the On-Screen Display, the ENTER button will select the item.

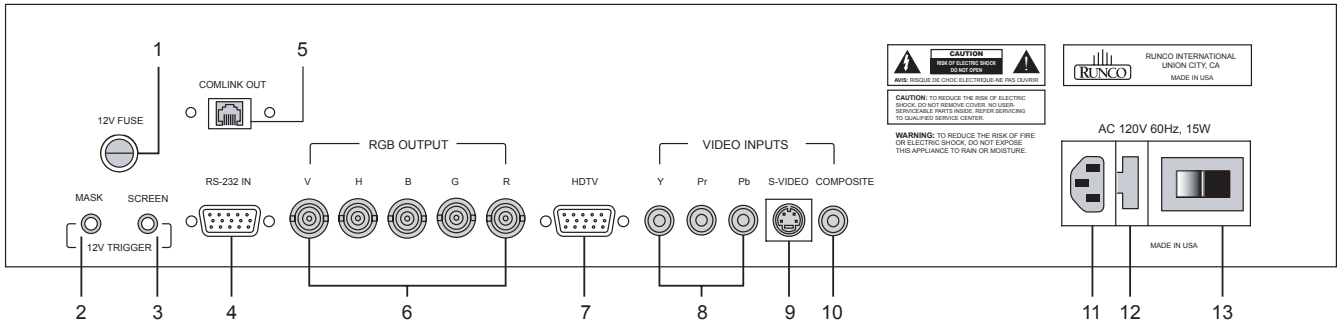
8. DOWN BUTTON
When no menu is present on-screen, this button will toggle you through the different aspect ratios.
When the menu is on-screen, the DOWN button will move the cursor down within a menu.
When an adjustment item has been selected (i.e. brightness), the DOWN button will decrease the value of that function.

9. RIGHT BUTTON
When no menus are present on-screen, the RIGHT button will toggle you through the five different sources, in the order of:

Composite ⟶ S-Video ⟶ Component ⟶ Component HD ⟶ RGB HD

10. MENU BUTTON
The MENU button brings up the main adjustment menu. After making adjustments, the MENU button will bring you back to the sub-menu, then to the main menu. The menu will then either time-out after approximately 10 seconds, or pressing the MENU button will remove the menu immediately.

Rear Panel



1. 12v FUSE

This fuse protects the 12v outputs from the MASK and SCREEN jacks.
(Screen Fuse: 5mm x 25mm, AGC, 0.5A, 250V, Fast Blow)

2. MASK

This is a 12V output that can be used to trigger curtains, lifts, etc. (1/4A maximum load).

3. SCREEN

This is a 12V output that can be used to trigger curatins, lifts, etc. (1/4A maximum load).

4. RS-232 IN

This is for systems using serial (RS-232) to control the PFP Controller.

5. COMLINK OUT

The output of this jack must be connected to the ComLink input of the PL-61cx Plasma monitor.
If this is not connected, neither the Controller or the Plasma can operate.

6. RGB OUTPUT

This is the RGB output of the PFP Controller. Connect the RGB output of the Controller to the PL-61cx's RGB BNC port.

7. HDTV/PROGRESSIVE DVD

This is the input for HDTV or progressive DVD sources.
If the signal is RGB, select 'RGB HD'; if it is Component, select 'Component HD'.

8. COMPONENT INPUT

This is the input for **Component Video** from sources such as DVD players.

Note: The component output from a DTV decoder or a progressive-scan DVD cannot be used with this port; it must be used with the HDTV port.

9. S-VIDEO INPUT

This is the input for **S-Video** from sources such as Satellite receivers, S-VHS VCR's and DVD players.

10. COMPOSITE VIDEO INPUT

This is the input for **Composite Video** from sources such as laser disc players, VCRs and other misc. sources.

11. POWER INPUT

Plug in Main Power here.

12. 115 VAC FUSE

This is the main AC Input fuse (.5A/250V).

13. MAIN POWER SWITCH

Disconnects or applies main power to the Controller.

PFP™ Controller Remote Description

A. IR OUTPUT INDICATOR
Illuminates when a button is pressed, indicating that an IR signal is being transmitted.

B. POWER BUTTON
Toggles the power on and off. For a discreet on or off command, you can use the direct access buttons (see 'J'). **Note:** When the main AC power switch is first turned ON, the Controller will go through an initiation cycle for approximately 15 seconds. The Controller cannot be turned on or operated until the initialization is complete.

C. UP BUTTON
When no menus are present on-screen, the UP button will toggle you through aspect ratios in the following order:
Virtual Wide → Letterbox → Standard (4:3) → Anamorphic
When the menu is on-screen, the UP button will move the cursor up within the menu. When an adjustment item has been selected (i.e. brightness), the UP button will increase the value of that function.

D. LEFT BUTTON
When no menus are present on-screen, the LEFT button will toggle you through the five different sources in the following order:
RGB HD → Component HD → Component → S-Video → Composite

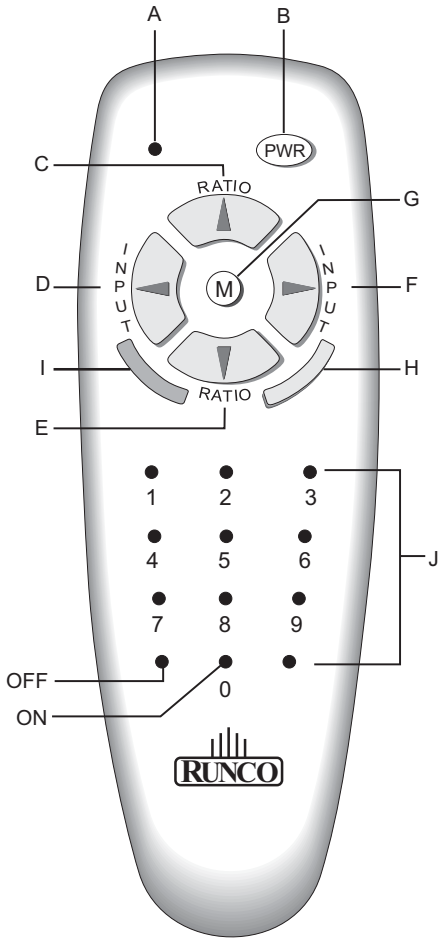
E. DOWN BUTTON
When no menus are present on-screen, the DOWN button will toggle you through aspect ratios in the following order:
Anamorphic → Standard (4:3) → Letterbox → Virtual Wide
When the menu is on-screen, the DOWN button will move the cursor down within the menu. When an adjustment item has been selected (i.e. brightness), the DOWN button will decrease the value of that function.

F. RIGHT BUTTON
When no menus are present on-screen, the RIGHT button will toggle you through the five different sources in the following order:
Composite → S-Video → Component → Component HD → RGB HD

G. MENU BUTTON
Pressing the MENU button will bring up the main menu. If no action is taken within approximately 10 seconds, the menu will time-out (disappear). Also, if you are in an adjustment mode or function, pressing MENU will bring the menu back one level.

H. ENTER BUTTON
When an item is highlighted on a menu, pressing ENTER will select that item.

I. PROGRAM BUTTON
If the remote control loses its 'memory' as a result of weak or dead batteries, it must be re-programmed for the **PFP Controller's** code set.
To reprogram the remote, press the PROGRAM button followed by 0,1,3.
Note: Pressing Enter after typing in the code is not necessary.

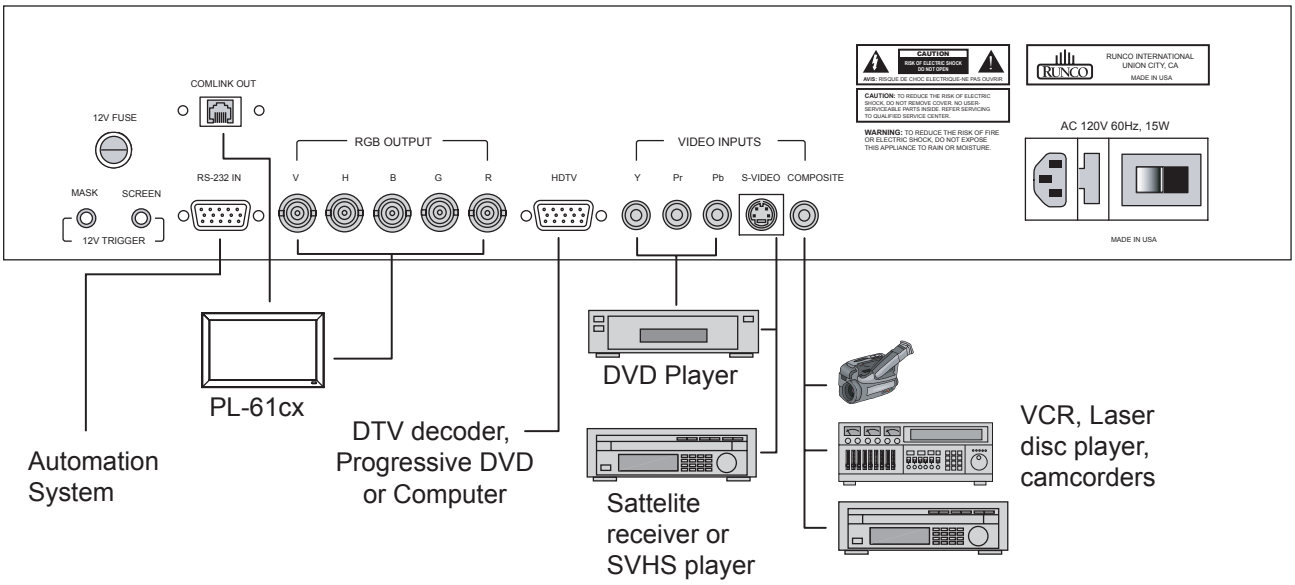


J. DIRECT ACCESS BUTTONS
These buttons will allow you to directly access an aspect ratio, source, or turn the unit on or off without having to go through any menus. These buttons are:

1: Selects COMPOSITE video
2: Selects S-video
3: Selects COMPONENT video
4: Selects Component HD
5: Selects RGB HD
6: Enables or Disables the Installation Menu
7: Selects the ANAMORPHIC aspect ratio
8: Selects the STANDARD (4:3) aspect ratio
9: Selects the LETTERBOX aspect ratio
0: Turns the Controller ON.
OFF: Also known as the button left of '0', this turns the Controller OFF.

Quick Set-up Guide

Connection Examples



While there are many different ways to connect your source equipment to your PFP Controller, the examples shown above are the most common and are recommended by Runco.

• COMPOSITE VIDEO INPUT:

Composite video is the most common type of signal used, but is also the lowest in picture quality. Many sources have outputs that are limited to Composite video, such as some VCR's and camcorders. Others, such as Laser Disc players, actually produce slightly better results when using Composite video. While the PFP Controller has an excellent decoder for Composite video, it is recommended that Composite video be used only if necessary.

• S-VIDEO INPUT

S-Video is the second-best type of signal that can be used, but is MUCH better than Composite video. Using such sources as satellite receivers, high-quality VCRs and DVD players (with no Component output) will-produce a MUCH cleaner and sharper signal. Decoder artifacts that are associated with Composite video (dot crawl and 'rainbows') are non-existent when using S-Video.

• COMPONENT INPUT

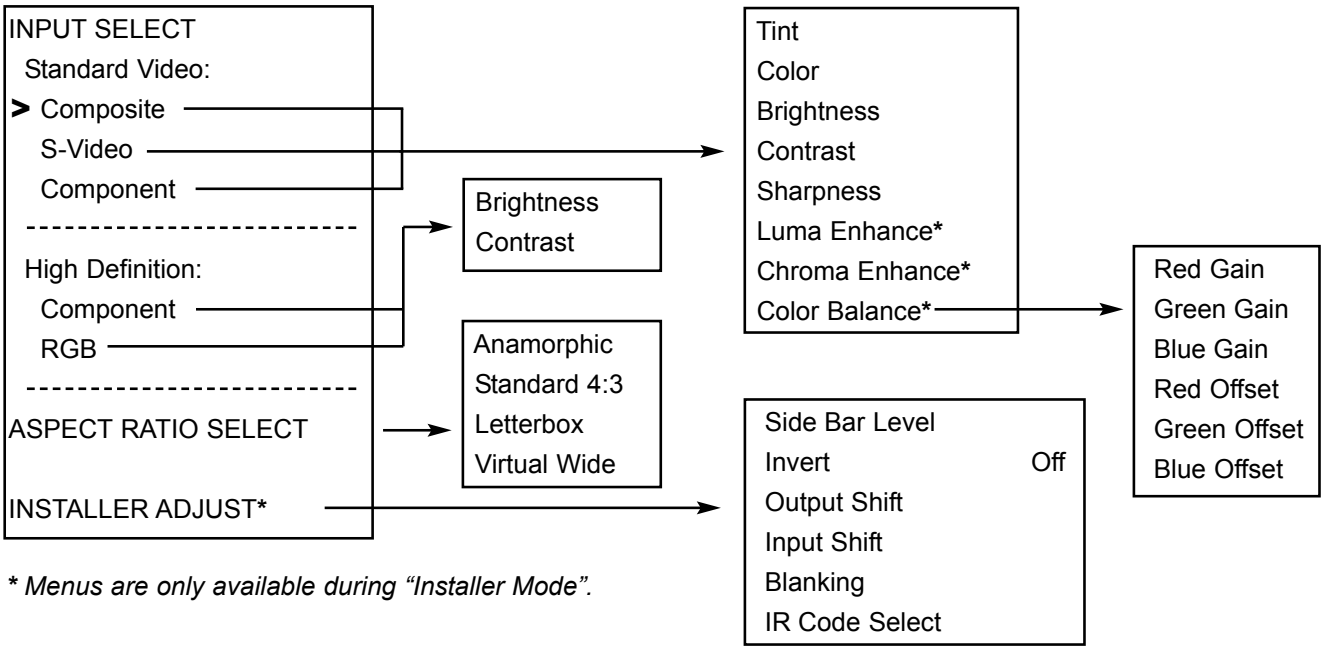
Component video is the best type of signal that can be used. The most common sources that use Component outputs are DVD players, and it is highly recommended that Component be used when possible. Component video goes one step beyond S-Video in picture quality; chroma (color) information is more resolved and the overall picture appears more well-defined.

• HDTV/COMPUTER

All HDTV signals must be input into this port. It may also be used for other high-resolution signals such as progressive DVD players or computers.

Menu Description and Navigation

Menu Tree



** Menus are only available during "Installer Mode".*

The menu tree above is an overall glance at the menu system in the PL-61cx.
The description of the menus and their functions are below.

Main Menu

The main menu includes three main sections: **INPUT SELECT** (Composite, S-video, Component, HD Component, HD RGB), **ASPECT RATIO SELECT** and **INSTALLER ADJUST**.
These menus are described in detail below:

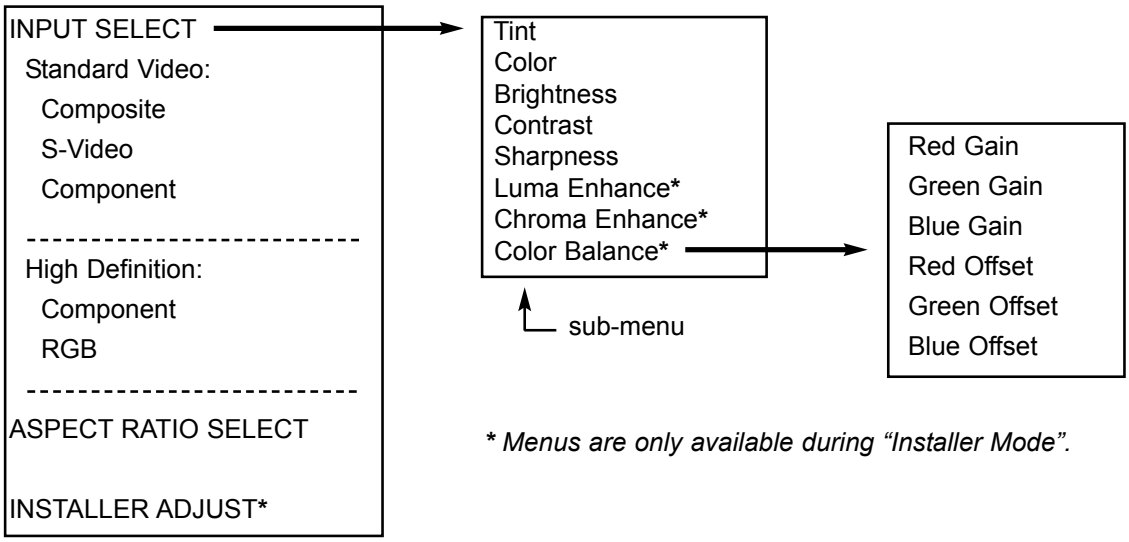
INPUT SELECT is done by highlighting the desired source with the up or down arrows and pressing ENTER. Sources may also be selected by pressing the left or right arrows on the front panel or remote, or by one of the direct access buttons on the remote. High Definition or progressive DVD signals are input to the HDTV port.

ASPECT RATIO SELECT is done by highlighting 'Aspect Ratio' on the main menu and pressing enter. The Aspect Ratio menu will then appear; and either ANAMORPHIC, STANDARD 4:3, LETTERBOX or VIRTUAL WIDE may be selected. Aspect ratios may also be selected by pressing either the up or down arrow buttons, or by one of the direct access buttons on the remote.

INSTALLER ADJUST is used for adjustments usually made during the initial installation. This includes Image Shift, Blanking, Side Bar Level and IR Code Select.

Picture Quality Adjustments

Main Menu



** Menus are only available during "Installer Mode".*

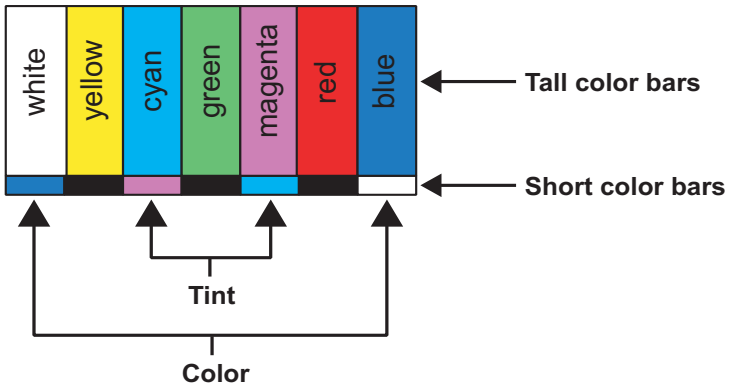
Picture quality adjustments (also known as "Front Panel Controls") are the controls that change different parameters of the image such as the amount of color, black level, etc. While these adjustments can be set to suit the needs of the user, there is a way to set these properly. This section will describe what each function does and how to adjust them properly.

To access the picture quality adjustments, press MENU, highlight the active source (indicated by the arrow) and press ENTER. The picture quality sub-menu will then appear (see above).

To make an adjustment to a particular function, highlight the function with the up or down arrow buttons and press ENTER. Once the function is on-screen (i.e. brightness), pressing the UP arrow button on the remote or front panel will increase the value of that function; pressing the DOWN arrow on the remote or front panel will decrease the value of that function.

While each of the picture quality adjustments can be set to suit the needs of the user, there is a 'proper' way to set the adjustments. For setting TINT and COLOR, please refer to the color bar test pattern below.

NOTE: Runco recommends that a BLUE FILTER be used so only the blue color bars can be seen. Blue filters are provided with the Video Essentials or AVIA test DVDs, or can be purchased from the Imaging Science Foundation (www.imagingscience.com).

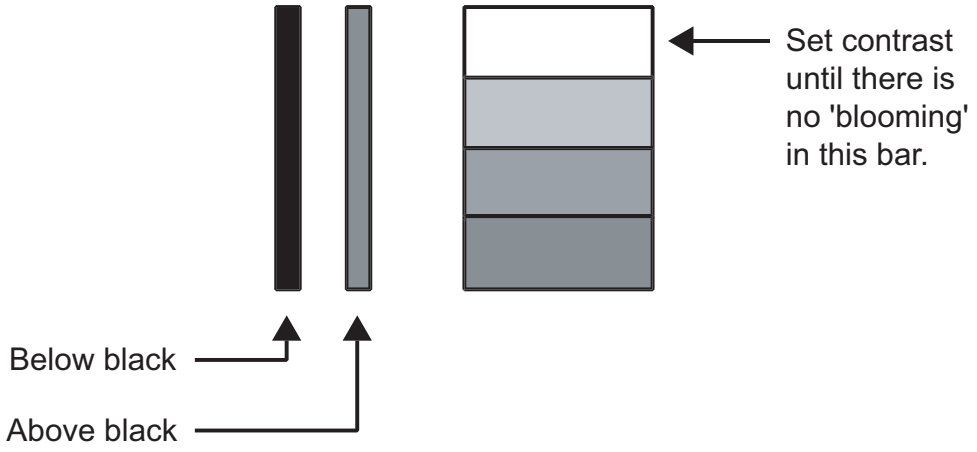


TINT (also known as 'hue') is essentially the ratio of red to green in the color portion of the image.

If TINT is decreased, the image will appear redder, and increasing it will cause the image to appear greener. To set TINT properly, look at the color bar pattern through a blue filter. Adjust TINT until the middle two tall color bars match the middle short color bars (see color bar drawing).

COLOR (also known as 'saturation') increases or decreases the amount of color in the image. To set COLOR properly, look at the color bar pattern through a blue filter. Adjust COLOR until the outer two tall color bars match the outer short color bars (see color bar drawing).

For setting ***CONTRAST*** and ***BRIGHTNESS***, please refer to the PLUGE pattern below:



CONTRAST adjusts the white level of the image. Adjust contrast until there is a distinct definition between the two brightest bars.

NOTE: For best results, Runco recommends that CONTRAST be set to 'midrange' or very close to it.

BRIGHTNESS adjusts the black level of the image. To adjust this properly, adjust BRIGHTNESS until the 'below black' bar JUST disappears, but the 'above black' bar is still barely visible.

NOTE: Some DVD players cannot pass the 'blacker than black' bar (they won't pass PLUGE), and that bar will never be visible. In a case like this, adjust the 'above black' bar until it is slightly brighter than the background that surrounds it.

SHARPNESS adjusts the amount of high-frequency detail in the image. This can be adjusted to the preference of the user. Keep in mind that when SHARPNESS is decreased, fine details in the image will become 'soft'; when it is increased, fine details will become sharper but will also make the picture appear 'noisy' if adjusted too high.

LUMA ENHANCE acts as an edge enhancement, especially around black to white transitions in the image. Essentially, this has the same characteristics as sharpness but affects the edges of objects far more that the rest of the image.

FREQUENCIES HIGH/LOW affect the overall range of the LUMA ENHANCE feature. For example, if using a lower-quality video source such as a VCR, the FREQUENCIES should be set to LOW. For a good quality source such as a DVD player, set FREQUENCIES to HIGH. To set FREQUENCIES, press ENTER while LUMA ENHANCE is on-screen.

Note: Luma Enhance will only appear in the menu after the installation mode has been enabled.

CHROMA ENHANCE acts as an edge enhancement, especially around color transitions in the image. Essentially, this has the same characteristics as sharpness but affects the edges of objects far more that the rest of the image.

FREQUENCIES HIGH/LOW affect the overall range of the CHROMA ENHANCE feature. For example, if using a lower-quality video source such as a VCR, the FREQUENCIES should be set to LOW. For a good quality source such as a DVD player, set FREQUENCIES to HIGH. To set FREQUENCIES, press ENTER while CHROMA ENHANCE is on-screen.

Note: Chroma Enhance will only appear in the menu after the installation mode has been enabled.

COLOR BALANCE sets the overall color temperature of the image. When Color Balance is selected, you will get a menu with Red Gain, Green Gain, Blue Gain, Red Offset, Green Offset and Blue Offset. The Gain Controls increase or decrease the amount of that color in the brightest areas of the image; the Offset Controls affect the darkest areas. This should be adjusted using a gray scale or Pluge pattern for best results.

Note: Color Balance will only appear in the menu after the installation mode has been enabled.

Installation Menu

The Installation menu is where you can adjust the image orientation, adjust keystone and even check the age of the lamp in the Plasma.

When the **Controller** is turned on for the first time, the INSTALLATION item will not appear in the main menu. To enable the INSTALLATION menu, there are two options:

· With the processor *ON* and no menus on-screen, simultaneously press the *ENTER*, *UP* and *LEFT* buttons (you don't need to hold them down). Release the three buttons and press MENU, ensure INSTALLER ADJUST is now on the bottom of the main menu.

· With the remote control, press button 6 (with no menus on-screen). After pressing '6', press *MENU* and ensure INSTALLER ADJUST is now on the bottom of the main menu.

After INSTALLER MODE has been accessed, press *MENU*, highlight INSTALLER ADJUST and press *ENTER*. This will bring up the INSTALLATION MENU, shown here:

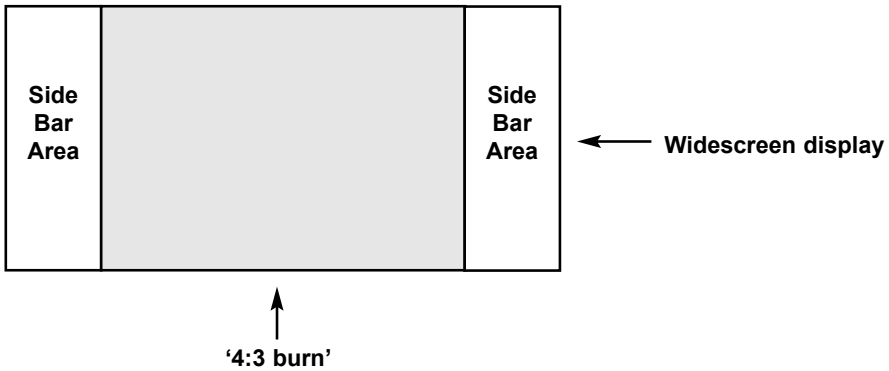
Once the installation mode has been enabled, you will also be able to access Luma Enhance, Chroma Enhance and Color Balance. These items will not appear anywhere in the menu until the installation mode is enabled.

INSTALLATION	
Side Bar Level	
Invert	Off
Output Shift	
Input Shift	
Blanking	
IR Code Select	

Side Bar Level

Phosphor-based displays such as Plasma (flat panel) displays, can be 'burned' by still-images or otherwise not using the full display or raster. Examples of this include ATM's, where the bank logo is permanently burned into the display. This is also the reason why most Plasma manufacturers strongly recommend against the use of video games with projection televisions, as many video games have still images in them.

Besides still images, using a 4:3 image on a widescreen display could cause a '4:3 burn'
(see below):



The example on the previous page shows what would happen on a widescreen display if a small 4:3 image were used more often than widescreen images.

To minimize this problem, the **PL-61cx** can provide SIDE BARS, which will put grey bars up on either side of a small 4:3 image (see 'side bar area' in the drawing above). This illuminates the otherwise unused portion of the display, minimizing a potential 4:3 burn.

SIDE BAR LEVEL is the amount of illumination in the side bars. The goal is not to make them so bright that they are much brighter than the 4:3 image itself (which could cause a reverse 4:3 burn), but not too dim where they cannot be effective. While there is not a recommended level, Runco recommends keeping the side bar level at a moderate level, approximately the same as the average light used on the 4:3 portion of the image.

To use side bar level, it will be necessary to 'unblank' the left and right sides of the image. Please follow this procedure to set side bar level:

- Ensure an active source is displayed on the screen or display.
- Select the standard (4:3) aspect ratio.
- Access the INSTALLATION menu, highlight BLANKING and press ENTER.
- Highlight LEFT with the up or down arrow buttons, then press and hold the left arrow button. You will begin to see the sidebar slowly appear on the left side.
  NOTE: If you do not see the sidebar begin to appear, increase the Side Bar Level and retry. Continue holding down the left arrow button until the left sidebar fills the left side of the screen.
- When the left side is fully unblanked, perform the same procedure for the right side.
- Once both sides are fully unblanked, you can set the level of the sidebars. Highlight SIDE BAR LEVEL on the INSTALLATION menu and press ENTER. Use the up arrow button to increase the illumination of the side bars, or the down arrow to decrease their illumination.
  NOTE: It is recommended that an active image be displayed on-screen, and the level of the sidebars be set to match the average amount of illumination on the 4:3 portion of the image.

Invert

If an image has been accidentally 'burned' into the display, the INVERT function will invert the colors so as to try to neutralize any 'burn' in the image. For example, white areas will become black, black areas will become white, etc.

In order for this to be effective, you MUST have the exact same image on-screen that was burned into the image, and it must be in the exact same place (ensure it was not electronically shifted). The amount of time the invert feature should be left on depends on the severity of the burn. Runco recommends that if you know how long the image was left on, leave the image 'inverted' for 50% of that time and re-evaluate the burn. Otherwise, leave it on for increments of an hour or two and re-evaluate the burn each time.

Output Shift

The OUTPUT SHIFT function shifts the entire image (including sidebars) up, down left or right. When you are centering the overall image, use output shift. If an image needs to be centered within the sidebars, use INPUT SHIFT (see below).

Input Shift

The INPUT SHIFT function shifts the video signal before it is processed. This is very effective if using a source that either is slightly out of phase or is otherwise off-center in relation to other sources. Examples of this include Satellite TV signals, or the output of a TIVO recorder. (TIVO users may find that a black bar exists on the right side of the image. If so, use INPUT SHIFT to move the image to the right).

IR Code Select

If the remote control loses its 'memory' as a result of weak or dead batteries, it must be re-programmed for the **PFP Controller's** code set.

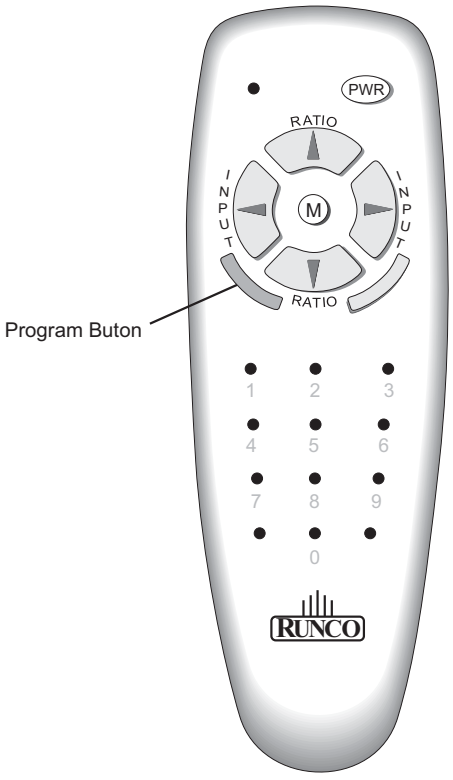
To reprogram the remote to the default IR Code Set, press the PROGRAM button followed by 0,1,3. If you have set the Controller for a different Code Set, enter that number instead of 0,1,3.

Note: Pressing Enter after typing in the code is not necessary.

To troubleshoot remote control problems, change the code by accessing the IR Code Set in the Installation Menu.IR Code Set allows the installer to choose from one of four different sets of IR codes. If the default code has commands that are conflicting other equipment, try using one of the other code sets.

When IR CODE SET is selected in the menu, you will get four code set options- 013, 215, 510 and 918. These numbers correspond to the number that is programmed into the remote control itself. For example, if you wish to use IR code set 510, you would first select '510 code set' from the menu, then program the remote for code 510 (as described above). You may also disable the IR receiver on the Controller all together by selecting 'Deactivated'. **In the event the Controller has been reset, the IR code set will default to 013.**

'Menu/Enter' invert allows the menu and enter buttons on the remote to reverse their functions; if 'YES' is selected, the menu button will become the enter button, and the enter button will become the menu button. This affects the remote ONLY.



Blanking

The BLANKING function allows you to 'cut off' part of the image to fit the screen properly, or to eliminate anomalies on the extreme outsides (usually the top) of the image. This can be done to the top, bottom, left or right sides individually.

Blanking

Top	131
Bottom	707
Left	241
Right	1292

To adjust BLANKING, highlight the desired area you wish to blank (top, bottom, left or right), and use the left and right arrows to make the adjustment.

System Reset

In the event that your **PL-61cx** appears to have a software problem, or adjustments have been made so far out of range that the image is no longer on-screen or discernable, you can reset the processor back to factory values. This sets ALL settings back to factory values, so any adjustments made previously will be lost.

To reset your PL-61cx, follow this procedure:

- Turn off the MAIN POWER switch on the back of the processor
- Hold down the DOWN ARROW button, and turn the MAIN POWER SWITCH back on.Continue holding the down arrow button until the LED on the front panel blinks, then release the down arrow button.

Once this is done, your processor has been completely reset to factory values. After resetting the unit, Composite video will be the active source.

SYSTEM RESET is not on any of the menus; it must be performed using the instructions above.

Basic Operations

POWER

To turn the unit ON and OFF:

1. Plug the power cord into an active AC power outlet.
2. Press the Power button (on the unit).
   The monitor's POWER/STANDBY indicator turns red and the standby mode is set.
3. Press the POWER ON button (on the remote control) to turn on the unit.
   The monitor's POWER/STANDBY indicator will light up (green) when the unit is on.
4. Press the POWER STANDBY button (on the remote control) or the Power button (on the unit) to turn off the unit.
   The monitor's POWER/STANDBY indicator turns red and the standby mode is set (only when turning off the unit with the remote control).

VOLUME

To adjust the sound volume:

1. Press and hold the VOLUME ⊕ button (on the remote control or the unit) to increase to the desired level.
2. Press and hold the VOLUME ⊖ button (on the remote control or the unit) to decrease to the desired level.

MUTE

To cancel the sound:

Press the MUTE button on the remote control to cancel the sound; press again to restore.

DISPLAY

To check the settings:

1. The screen changes each time the DISPLAY button is pressed.
2. If the button is not pressed for approximately three seconds, the menu turns off.

DIGITAL ZOOM

Digital zoom specifies the picture position and enlarges the picture.

1. Press the POINTER button to display the pointer. ( )

   To change the size of the picture:
   Press the ZOOM+ button and enlarge the picture.
   The pointer will change to resemble a magnifying glass. ( )
   A press of the ZOOM- button will reduce the picture and return it to its original size.

   To change the picture position:
   Select the position with the ▲▼◀▶ buttons.

2. Press the POINTER button to delete the pointer.

AUTO ADJUST

To adjust the size or quality of the picture automatically:

Press the AUTO ADJUST button.

Information

■ AUTO ADJUST ON setting

When RGB (still picture) input is selected ..... Fine Picture, Picture ADJ, Position, and Contrast will be adjusted automatically.

When RGB (motion picture), VIDEO, or Y/Pb/Pr (component) input is selected ..... The screen size switches to ZOOM mode automatically with the superimposed caption displayed fully only when the picture contains dark areas above and below the picture.

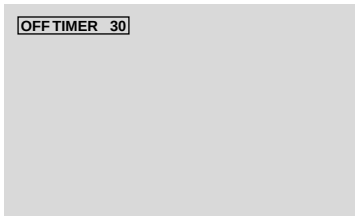
OFF TIMER

To set the off timer:

The off timer can be set to turn the power off after 30, 60, 90 or 120 minutes.

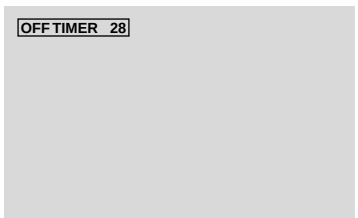
1. Press the OFF TIMER button to start the timer at 30 minutes.
2. Press the OFF TIMER button to the desired time.
3. The timer starts when the menu turns off.

→ **30** → **60** → **90** → **120** → **0**



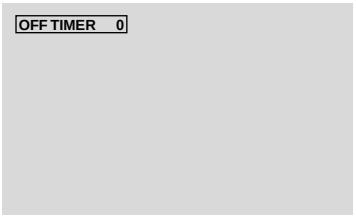
To check the remaining time:

1. Once the off timer has been set, press the OFF TIMER button once.
2. The remaining time is displayed, then turns off after a few seconds.
3. When five minutes remain the remaining time appears until it reaches zero.



To cancel the off timer:

1. Press the OFF TIMER button twice in a row.
2. The off timer is canceled.



Note:

After the power is turned off with the off timer ...
A slight current is still supplied to the monitor. When you are leaving the room or do not plan to use the system for a long period of time, turn off the power of the monitor.

WIDE Operations

Wide Screen Operation (manual)

With this function, you can select one of six screen sizes.

When viewing videos or digital video discs

1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.

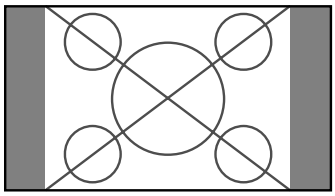
   The screen size switches as follows:

   → **NORMAL** → **FULL** → **STADIUM** → **ZOOM** → **2.35:1** → **14:9**

   When a 720P or 1080I signal is input:

   FULL ↔ **2.35:1**

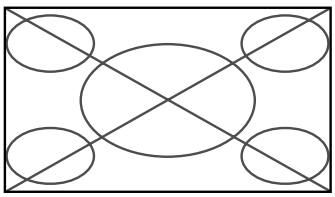
NORMAL size screen (4:3)



The normal size screen is displayed.

* The picture has the same size as video pictures with a 4 : 3 aspect ratio.

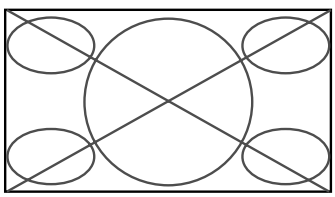
FULL size screen



The image is expanded in the horizontal direction.

* Images compressed in the horizontal direction ("squeezed images") are expanded in the horizontal direction and displayed on the entire screen with correct linearity. (Normal images are expanded in the horizontal direction.)

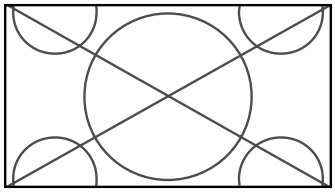
STADIUM size screen



The picture is expanded in the horizontal and vertical directions at different ratios.

* Use this for watching normal video programs (4:3) with a wide screen.

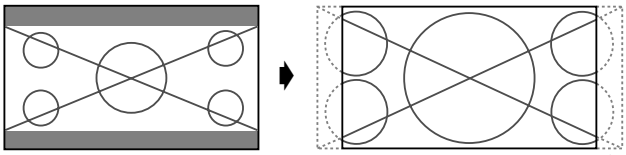
ZOOM size screen



The picture is expanded in the horizontal and vertical direction, maintaining the original proportions.

* Use this for theater size (wide) movies, etc.

2.35:1 size screen



Original image

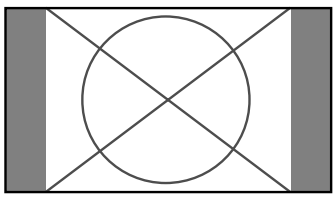
Information is lost on both sides.

The squeezed film image is expanded to fulfill the entire screen at a ratio of 2.35:1. Black bands do not appear at the top and bottom but information is lost on the left and right margins.

- This feature is available when the input signal is video, component (480I, 480P, 576I, 576P, 720P, 1080I) or RGB (525P or 625P signal from a scan converter).

* If black bands appear on the top and bottom in the full size screen, select the 2.35:1 size screen to avoid phosphor burn-in.

14:9 size screen



The image is displayed at a 14:9 aspect ratio.

* This feature is available when the input signal is video, component (480I, 480P, 576I, 576P) or RGB (525P or 625P signal from a scan converter).

Note:

Do not allow a displayed image in 4:3 mode for an extended period. This can cause a phosphor burn-in.

Wide Screen Operation with Computer Signals

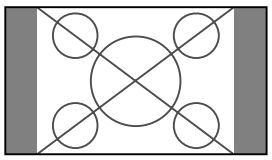
Switch to the wide screen mode to expand the 4 : 3 image to fill the entire screen.

1. Press the WIDE button on the remote control.
2. *Within 3 seconds ...*

   Press the WIDE button again.
   The screen size switches as follows:

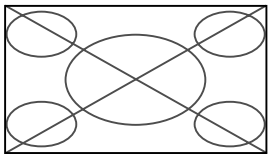
→ **NORMAL** → **FULL** → **ZOOM**

NORMAL size screen (4:3 or SXGA 5:4)



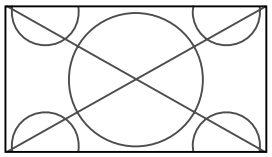
The picture has the same size as the normal computer image.

FULL size screen



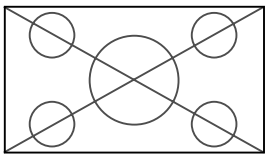
The image is expanded in the horizontal direction.

ZOOM size screen



When wide signals are input.

FULL size screen



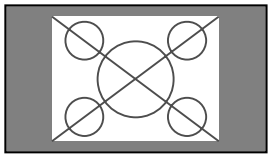
When "PICTURE SIZE" is set to "OFF"

* This cannot be set in some models. "TRUE size" will not be displayed in such cases.

The screen size switches as follows:

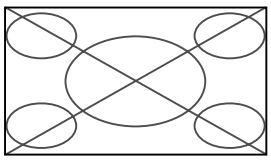
→ **TRUE** → **FULL** → **ZOOM**

TRUE size screen (VGA, SVGA 4:3)



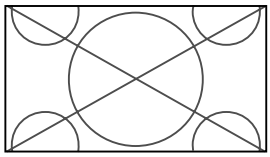
The image is true resolution.

FULL size screen



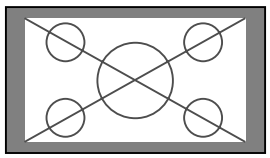
The image is expanded in the horizontal and vertical direction.

ZOOM size screen



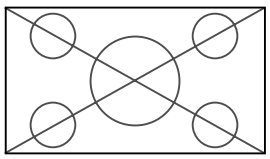
When wide signals are input.

TRUE



The image is true resolution.

FULL



Information

■ Supported resolution

See page 56 of Model Information for details on the display output of the various VESA signal standards supported by the monitor.

■ "PICTURE SIZE" setting

When the setting of "PICTURE SIZE" is OFF, the size of RGB-input pictures will be TRUE in place of NORMAL.

■ When 852 (848) dot × 480 line wide VGA* signals with a vertical frequency of 60 Hz and horizontal frequency of 31.7 (31.0) kHz are input

Select an appropriate setting for RGB SELECT mode referring to the"Table of Signals Supported" on page 7 of Model Information.

* "VGA", "SVGA" and "SXGA" are registered trademarks of IBM, Inc. of the United States.

Note:

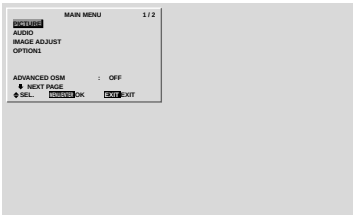
Do not allow a displayed image in 4:3 mode for an extended period. This can cause a phosphor burn-in.

OSM(On Screen Menu) Controls

Menu Operations

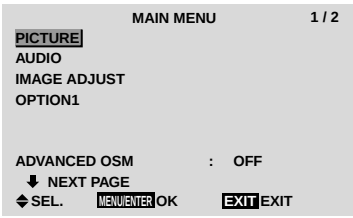
The OSM window is displayed with respect to the screen as shown on the diagram.

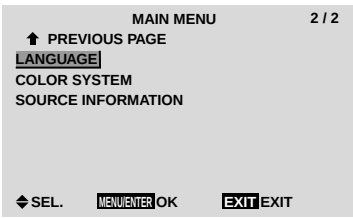
* Depending on the screen's mode, the OSM may be displayed differently.
  In the explanation, the OSM section is shown close up.



The following describes how to use the menus and the selected items.

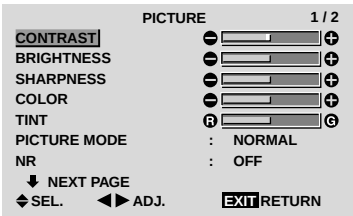
1. Press the MENU/ENTER button on the remote control to display the MAIN MENU.





2. Press the cursor buttons ▲ ▼ on the remote control to highlight the menu you wish to enter.

3. Press the MENU/ENTER button on the remote control to select a sub menu or item.



4. Adjust the level or change the setting of the selected item by using the cursor buttons ◀ ▶ on the remote control.

5. The adjustments or the settings that are stored in memory.
   The change is stored until you change it again.

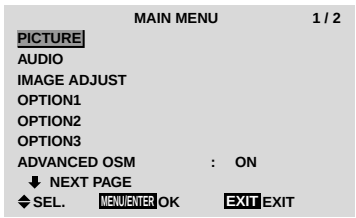
6. Repeat steps 2 – 5 to adjust an additional item, or press the EXIT button on the remote control to return to the main menu.

Note: *The main menu disappears by pressing the EXIT button.*

Information

■ Advanced menu mode

When "ADVANCED OSM" is set to "ON" in the main menu (1/2), full menu items will be shown.



Menu Tree

:Shaded areas indicate the default value.
−←→+ : Press the ◀ or ▶ button to adjust. The default value is at the center.
[ ] :Menu items in a ruled box are available when the ADVANCED OSM is set to ON.

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
PICTURE	CONTRAST	−←→+			YES	18
	BRIGHTNESS	−←→+			YES	18
	SHARPNESS	−←→+			YES	18
	COLOR	−←→+			YES	18
	TINT	−←→+			YES	18
	PICTURE MODE	BRIGHT/NORMAL/THEAT.1/THEAT.2/DEFAULT			YES	18
	NR	OFF/NR-1/NR-2/NR-3			YES	19
	COLOR TEMP	LOW/MID LOW/MID/HIGH			YES	19
	WHITE BALANCE	GAIN RED	−←→+		YES	19
		GAIN GREEN	−←→+		YES	19
		GAIN BLUE	−←→+		YES	19
		BIAS RED	−←→+		YES	19
		BIAS GREEN	−←→+		YES	19
		BIAS BLUE	−←→+		YES	19
		RESET	OFF←→ON		YES	19
	GAMMA	1←→2←···→4			YES	20
	LOW TONE	AUTO←→1←···→3			YES	20
	COLOR TUNE	RED	Y←→M		YES	21
		GREEN	C←→Y		YES	21
		BLUE	M←→C		YES	21
		YELLOW	G←→R		YES	21
		MAGENTA	R←→B		YES	21
		CYAN	B←→G		YES	21
		RESET	OFF←→ON		YES	21

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
AUDIO	BASS	−←→+			YES	21
	TREBLE	−←→+			YES	21
	BALANCE	L←→R			YES	21
	AUDIO INPUT1	VIDEO 1-3 / HD/DVD 1-2 / RGB 1-3			YES	22
	AUDIO INPUT2	VIDEO 1-3 / HD/DVD 1-2 / RGB 1-3			YES	22
	AUDIO INPUT3	VIDEO 1-3 / HD/DVD 1-2 / RGB 1-3			YES	22

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
IMAGE ADJUST	ASPECT MODE	NORMAL/FULL/STADIUM/ZOOM/2.35:1/14:9			—	22
	V-POSITION	−←→+			YES	22
	H-POSITION	−←→+			YES	22
	V-HEIGHT	−←→+			YES	22
	H-WIDTH	−←→+			YES	22
	AUTO PICTURE	OFF←→ON*2			NO	22
	FINE PICTURE*1	−←→+ *2			YES	22
	PICTURE ADJ.*1	−←→+ *2			YES	22

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
OPTION1	OSM	DISPLAY OSM	OFF←→ON		YES	23
		OSM ADJ.	1←···→6		YES	23
		OSM ANGLE	H←→V		YES	23
		OSM ORBITER	OFF←→ON		YES	23
	BNC INPUT	RGB←→COMP.			YES	24
	D-SUB INPUT	RGB			—	24
	RGB SELECT	AUTO/STILL/MOTION/WIDE1/WIDE2/DTV			YES	24
	HD SELECT	1080B/1035I/1080A			NO	25
	INPUT SKIP	OFF←→ON			YES	25
	ALL RESET	OFF←→ON			—	26

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
OPTION2	PWR. MGT.	OFF←→ON			YES	26
	CINEMA MODE	OFF←→ON			YES	27
	LONG LIFE	PLE	AUTO/LOCK 1/LOCK 2/LOCK 3		YES	27
		ORBITER	AUTO 1		YES	28
			AUTO 2		YES	28
			MANUAL	H-DOT/V-LINE/TIME	YES	28
			OFF		YES	28
		INVERSE	OFF		YES	28
			ON	WORKING TIME/WAITING TIME	YES	28
			WHITE		YES	28
		SCREEN WIPER	OFF		YES	29
			ON	WORKING TIME/WAITING TIME/SPEED	YES	29
		SOFT FOCUS	OFF/1/2/3/4		YES	30
	GRAY LEVEL	0←···→3←···→15			YES	30
	S1/S2	AUTO←→OFF			YES	30
	PICTURE SIZE*3	OFF←→ON			YES	31
	DVI SET UP*4	PLUG/PLAY	PC←→STB/DVD		NO	31
		BLACK LEVEL	LOW←→HIGH		NO	31

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
OPTION3	TIMER	PRESENT TIME	DAYLIGHT SAIVING TIME	OFF←→ON	NO	31
			DAY/HOUR/MINUTES		NO	31
		PROGRAM	OFF		YES	32
			ON	DATE/ON/OFF(HOUR, MINUTE)/INPUT/FUNCTION	YES	32
	PWR. ON MODE	LAST / VIDEO 1-3 / HD/DVD 1-2 / RGB 1-3			YES	33
	CONTROL LOCK	OFF←→ON			YES	34
	IR REMOTE	OFF←→ON			YES	34
	LOOP OUT	OFF←→ON			YES	35
	ID NUMBER	ALL←→1←···→256			YES	35
	VIDEO WALL	DIVIDER	OFF/1/4/9		YES	36
		POSITION	No.1←···→No.4/No.7←···→No.15		—	36
		DISP. MODE	SPLIT←→BLANK		YES	37
		AUTO ID	OFF←→ON		YES	37
		IMAGE ADJUST	ASPECT MODE	NORMAL/FULL/STADIUM/ZOOM/2.35:1/14:9	—	37
			V-POSITION	−←→+	YES	37
			H-POSITION	−←→+	YES	37
			V-HEIGHT	−←→+	YES	37
			H-WIDTH	−←→+	YES	37
			AUTO PICTURE	OFF←→ON*2	NO	37
			FINE PICTURE*1	−←→+ *2	YES	37
			PICTURE ADJ.*1	−←→+ *2	YES	37
		P. ON DELAY	OFF←→ON		YES	38
		PLE LINK	OFF←→ON		YES	38
		REPEAT TIMER	OFF		YES	39
			ON	DIVIDER/SOURCE/WORK TIME	YES	39

Main menu	Sub menu	Sub menu 2	Sub menu 3	Sub menu 4	RESET	REFERENCE
ADVANCED OSM	OFF←→ON				YES	39
LANGUAGE	ENGLISH/DEUTSCH/FRANÇAIS/ESPAÑOL/ITALIANO/SVENSKA/中文				NO	40
COLOR SYSTEM	AUTO/3.58NTSC/4.43 NTSC/PAL/PAL 60/PAL-N/PAL-M/SECAM				NO	40
SOURCE INFORMATION	—				—	40

*1 Only when AUTO PICTURE is OFF
*2 RGB/PC only
*3 Cannot be set in some models.

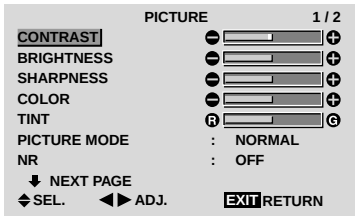
Picture Settings Menu

Adjusting the picture

The contrast, brightness, sharpness, color and tint can be adjusted as desired.

Example: Adjusting the contrast

1. On the MAIN MENU, select “PICTURE”, then press the MENU/ENTER button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “CONTRAST”.



3. Use the ◀ and ▶ buttons to adjust the contrast.

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

Note: *If “CAN NOT ADJUST” appears ...*
When trying to enter the PICTURE submenu, make sure PICTURE MODE is not set to DEFAULT.

Information

■ Picture adjustment screen

CONTRAST .... Changes the picture’s white level.
BRIGHTNESS .. Changes the picture’s black level.
SHARPNESS .. Changes the picture’s sharpness. Adjusts picture detail of VIDEO display.
COLOR ..... Changes the color density.
TINT ..... Changes the picture’s tint. Adjust for natural colored skin, background, etc.

■ Adjusting the computer image

Only the contrast and brightness can be adjusted when a computer signal is connected.

■ Restoring the factory default settings

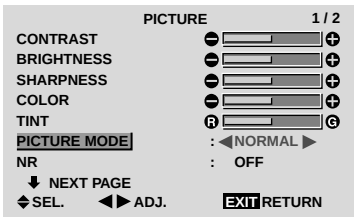
Select “DEFAULT” under the “PICTURE MODE” settings.

Setting the picture mode according to the brightness of the room

There are four picture modes that can be used effectively according to the environment in which you are viewing the display.

Example: Setting the “THEAT. 1” mode

1. On the MAIN MENU, select “PICTURE”, then press the MENU/ENTER button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “PICTURE MODE”.



3. *To set to “THEAT. 1” ...*
   Use the ◀ and ▶ buttons to select “THEAT. 1”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ BRIGHT ↔ NORMAL ↔ THEAT. 1 ↔ THEAT. 2 ↔ DEFAULT ←

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

Information

■ Types of picture modes

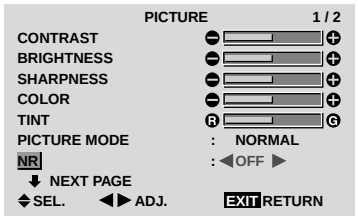
THEAT. 1, 2 ..... Set this mode when watching video in a dark room.
This mode provides darker, finer pictures, like the screen in movie theaters.
For a darker image, select THEAT. 2.
NORMAL ..... Set this mode when watching video in a bright room.
This mode provides dynamic pictures with distinct differences between light and dark sections.
BRIGHT ..... This mode provides brighter pictures than NORMAL.
DEFAULT ..... Use this to reset the picture to the factory default settings.

Reducing noise in the picture

Use these settings if the picture has noise due to poor reception or when playing video tapes on which the picture quality is poor.

Example: Setting “NR-3”

1. On the MAIN MENU, select “PICTURE”, then press the MENU/ENTER button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “NR”.



3. Use the ◀ and ▶ buttons to select “NR-3”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ **OFF** ↔ **NR-1** ↔ **NR-2** ↔ **NR-3** ←

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

Information

■ NR

* “NR” stands for Noise Reduction.
* This function reduces noise in the picture.

■ Types of noise reduction

There are three types of noise reduction. Each has a different level of noise reduction.
The effect becomes stronger as the number increases (in the order NR-1 → NR-2 → NR-3).
OFF ..... Turns the noise reduction function off.

Setting the color temperature

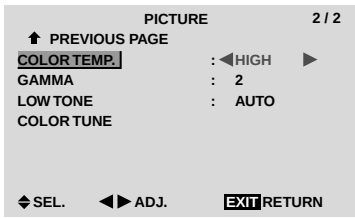
Use this procedure to set color tone produced by the plasma display.

Example: Setting “HIGH”

1. On the MAIN MENU, select “PICTURE”, then press the MENU/ENTER button.
   The “PICTURE” screen appears.
2. Use the ▲ and ▼ buttons to select “COLOR TEMP.”.
3. Use the ◀ and ▶ buttons to select “HIGH”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ **LOW** ↔ **MID LOW** ↔ **MID** ↔ **HIGH** ←

* See below to set “WHITE BALANCE”.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

Information

■ Setting the color temperature

LOW ..... Redder
MID LOW ..... Slightly redder
MID ..... Standard (slightly bluer)
HIGH ..... Bluer

■ Restoring the factory default settings

Select “ALL RESET” under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Adjusting the color to the desired level

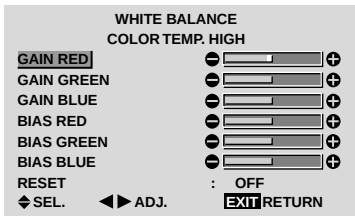
Use this procedure to adjust the white balance for each color temperature to achieve the desired color quality.

Example: Adjusting the “GAIN RED” of “HIGH” color temperature

Set “ADVANCED OSM” to “ON” in the main menu (1/2), then perform the following operations.

Perform Steps 1-3 of COLOR TEMP., then...

4. Press the MENU/ENTER button.
   The “WHITE BALANCE” screen appears.
5. Use the ▲ and ▼ buttons to select “GAIN RED”.



6. Adjust the white balance using the ◀ and ▶ buttons.

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

Information

■ Adjusting the white balance

GAIN R/G/B ..... White balance adjustment for signal level

BIAS R/G/B ..... White balance adjustment for black level

RESET ..... Resets settings to the factory default values. Use ◀ and ▶ buttons to select "ON", then press the MENU/ENTER button.

■ Restoring the factory default settings

Select "RESET" under the WHITE BALANCE menu.

Changing the Gamma Curve

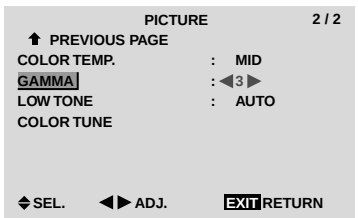
This feature adjusts the brightness of the midtone areas while keeping shadows and highlights unchanged.

Example: Setting "3"

Set "ADVANCED OSM" to "ON" in the MAIN MENU (1/2), then perform the following operations.

1. On the MAIN MENU, select "PICTURE", then press the MENU/ENTER button.
   The "PICTURE" screen appears.
2. Use the ▲ and ▼ buttons to select "GAMMA".
3. Use the ◀ and ▶ buttons to select "3".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → 1 ↔ 2 ↔ 3 ↔ 4 ←



Information

■ GAMMA settings

The picture becomes darker as the number increases (in the sequence of 1, 2, 3, 4).

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Making the Low Tone adjustments

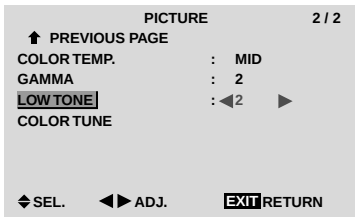
This feature allows more detailed tone to be reproduced especially in the dark area.

Example: Setting "2"

Set "ADVANCED OSM" to "ON" in the MAIN MENU (1/2), then perform the following operations.

1. On the MAIN MENU, select "PICTURE", then press the MENU/ENTER button.
   The "PICTURE" screen appears.
2. Use the ▲ and ▼ buttons to select "LOW TONE".
3. Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → AUTO ↔ 1 ↔ 2 ↔ 3 ←



Information

■ LOW TONE settings

AUTO ..... Will automatically appraise the picture and make adjustments.

1 ..... Will apply the dither method suitable for still pictures.

2 ..... Will apply the dither method suitable for motion pictures.

3 ..... Will apply the error diffusion method.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

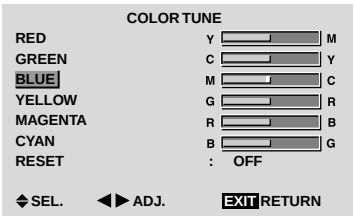
Adjusting the colors

Use this procedure to adjust hue and color density for red, green, blue, yellow, magenta and cyan.
You can accentuate the green color of trees, the blue of the sky, etc.

Example: Adjusting the color tune for blue

Set "ADVANCED OSM" to "ON" in the MAIN MENU (1/2), then perform the following operations.

1. On the MAIN MENU, select "PICTURE", then press the MENU/ENTER button.
   The "PICTURE" screen appears.
2. Use the ▲ and ▼ buttons to select "COLOR TUNE", then press the MENU/ENTER button.
   The "COLOR TUNE" screen appears.
3. Use the ▲ and ▼ buttons to select "BLUE".
4. Adjust using the ◀ and ▶ buttons.



* If neither the ◀ or ▶ button is pressed within 5 seconds, the current selection is set and the previous screen reappears.

To continue making other adjustments...
Repeat from step 3.

Information

■ COLOR TUNE settings

RED ..... Makes red's adjustment
GREEN ..... Makes green's adjustment
BLUE ..... Makes blue's adjustment
YELLOW ..... Makes yellow's adjustment
MAGENTA ..... Makes magenta's adjustment
CYAN ..... Makes cyan's adjustment
RESET ..... Resets settings to the factory default value. Use ◀ and ▶ buttons to select "ON", then press the MENU/ENTER button.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

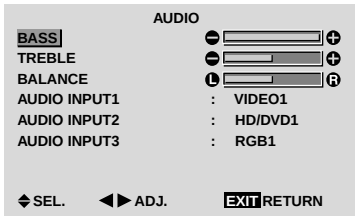
Audio Settings Menu

Adjusting the treble, bass and left/right balance and audio input select

The treble, bass and left/right balance can be adjusted to suit your tastes.

Example: Adjusting the bass

1. On the MAIN MENU, select "AUDIO", then press the MENU/ENTER button.
   The "AUDIO" screen appears.
2. *To adjust the bass ...*
   Use the ▲ and ▼ buttons to select "BASS".
3. Adjust the bass using the ◀ and ▶ buttons.



To continue adjusting the audio ...
Repeat from step 2.

Note : *If "CAN NOT ADJUST" appears...*
Set "AUDIO INPUT" on the AUDIO menu correctly.

Information

■ Audio settings menu

BASS ..... Controls the level of low frequency sound.
TREBLE ..... Controls the level of high frequency sound.
BALANCE ..... Controls the balance of the left and right channels.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Setting the allocation of the audio connectors

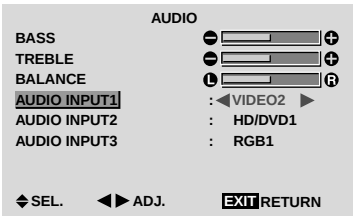
Setting the AUDIO 1, 2, and 3 connectors to the desired input.

Example: Setting “AUDIO INPUT1” to “VIDEO 2”

1. On the MAIN MENU, select “AUDIO”, then press the MENU/ENTER button.
   The “AUDIO” screen appears.
2. Use the ▲ and ▼ buttons to select “AUDIO INPUT1”.
3. *To set the AUDIO INPUT1 to “VIDEO2”...*
   Use the ◀ and ▶ buttons to select “VIDEO2”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   The available sources depend on the setting of “BNC INPUT”.

RGB: → **VIDEO1** ↔ **VIDEO2** ↔ **VIDEO3** ↔ **HD/DVD1** ← → **RGB3** ↔ **RGB2** ↔ **RGB1** ←

COMP.: → **VIDEO1** ↔ **VIDEO2** ↔ **VIDEO3** ↔ **HD/DVD1** ← → **RGB3** ↔ **RGB1** ↔ **HD/DVD2** ←



Information

■ AUDIO INPUT

A single audio input cannot be selected as the audio channel for more than one input terminal.

■ Restoring the factory default settings

Select “ALL RESET” under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Image Adjust Settings Menu

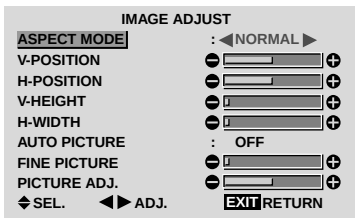
Adjusting the Position, Size, Fine Picture, Picture Adj

The position of the image can be adjusted and flickering of the image can be corrected.

Example: Adjusting the vertical position in the normal mode

1. On the MAIN MENU, select “IMAGE ADJUST”, then press the MENU/ENTER button.
   The “IMAGE ADJUST” menu appears.

Default settings (when RGB/PC is selected)



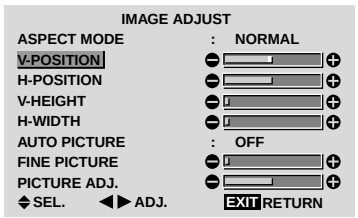
* The settings on the IMAGE ADJUST menu are not preset at the factory.

To select a mode ...
Use the ◀ and ▶ buttons to select a mode.
The mode switches as follows each time the ◀ or ▶ button is pressed:

NORMAL ↔ **FULL**

* The mode can also be switched by pressing the “WIDE” button on the remote control.

2. *To adjust the vertical position ...*
   Use the ▲ and ▼ buttons to select “V-POSITION”.



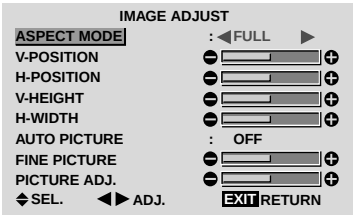
3. Adjust using the ◀ and ▶ buttons.

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

To continue making other computer image adjustments ...
Repeat from step 2.

Information

■ When "AUTO PICTURE" is "OFF"



When Auto Picture is off, the Fine Picture and the Picture ADJ. items are displayed so that you can adjust them.

■ Adjusting the Auto Picture

ON ..... The Picture ADJ., Fine Picture and Position adjustments are made automatically.
Not available for digital ZOOM.

OFF ..... The Picture ADJ., Fine Picture and Position adjustments are made manually.

* If FINE PICTURE won't be adjusted, set Auto Picture to OFF and adjust manually.

■ Adjusting the position of the image

V-POSITION ... Adjusts the vertical position of the image.

H-POSITION ... Adjusts the horizontal position of the image.

V-HEIGHT ..... Adjusts the vertical size of the image. (Except for STADIUM mode)

H-WIDTH ..... Adjusts the horizontal size of the image. (Except for STADIUM mode)

FINE PICTURE* .. Adjusts for flickering.

PICTURE ADJ.* ... Adjusts for striped patterns on the image.

* The Picture ADJ. and Fine Picture features are available only when the "Auto Picture" is off.

* The AUTO PICTURE, FINE PICTURE and PICTURE ADJ. are available only for RGB signals.
But, these features are not available for moving pictures on VIDEO, HD/DVD or RGB.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults except for Auto Picture.

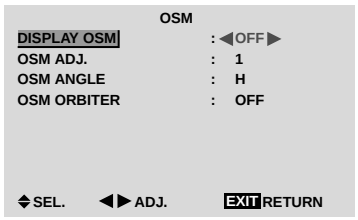
Option1 Settings Menu

Setting the on-screen menu

This sets the position of the menu, the display format (horizontal or vertical) etc.

Example: Turning the DISPLAY OSM off

1. On the MAIN MENU, select "OPTION1", then press the MENU/ENTER button.
   The "OPTION1" menu appears.
2. Use the ▲ and ▼ buttons to select "OSM", then press the MENU/ENTER button.
   The "OSM" menu appears.
3. Use the ▲ and ▼ buttons to select "DISPLAY OSM".
4. *To set the DISPLAY OSM to "OFF"...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



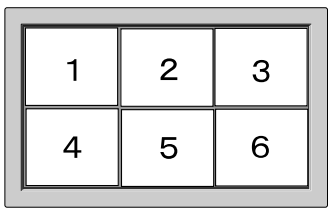
Information

■ DISPLAY OSM settings

ON ..... The on-screen menu appears.
OFF ..... The on-screen menu does not appear.
If you press the DISPLAY button on the remote control for more than 3 seconds the main menu will appear and can be set (although it is not ON).

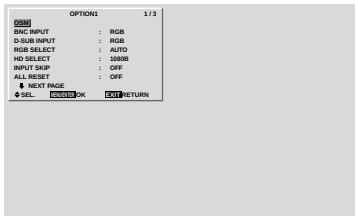
■ OSM ADJUST settings

Adjusts the position of the menu when it appears on the screen.
The position can be set between 1 to 6.

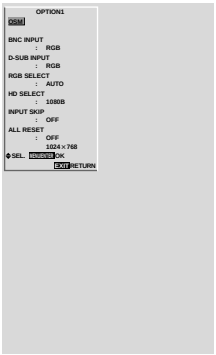


■ OSM ANGLE settings

Sets the display format (landscape "H" or portrait "V"). When the unit is installed vertically set the OSM ANGLE at "V".
"H"



"V"



■ OSM ORBITER settings

ON ..... The position of the menu will be shifted by eight dots each time OSM is displayed.
OFF ..... OSM will be displayed at the same position.

■ Restoring the factory default settings

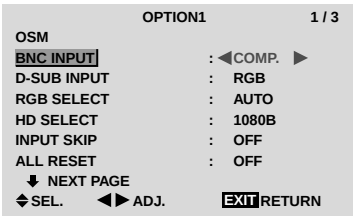
Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults except for Auto Picture.

Setting the BNC connectors

Select whether to set the input of the 5 BNC connectors to RGB and component.

Example: Set the BNC INPUT mode to "COMP."

1. On the MAIN MENU, select "OPTION1", then press the MENU/ENTER button.
   The "OPTION1" screen appears.
2. Use the ▲ and ▼ buttons to select "BNC INPUT".
3. *To set the BNC INPUT mode to "COMP."...*
   Use the ◀ and ▶ buttons to select "COMP.".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   RGB ↔ COMP.



Information

■ BNC INPUT Settings

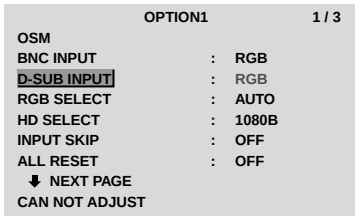
RGB ..... Use the 5BNC terminals for RGB input.
COMP. ..... Use the 3BNC terminals for component input.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Checking the signal being transmitted to RGB1 terminal

Use this to confirm the signal being transmitted to the RGB1 terminal.
It is set to RGB and can not be adjusted.



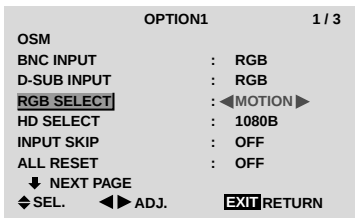
Setting a computer image to the correct RGB select screen

With the computer image, select the RGB Select mode for a moving image such as (video) mode, wide mode or digital broadcast.

Example: Setting the "RGB SELECT" mode to "MOTION "

1. On the MAIN MENU, select "OPTION1", then press the MENU/ENTER button.
   The "OPTION1" screen appears.
2. Use the ▲ and ▼ buttons to select "RGB SELECT".
3. *To set the RGB select mode to "MOTION" ...*
   Use the ◀ and ▶ buttons to select "MOTION".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   → **AUTO ↔ STILL ↔ MOTION ↔ WIDE1 ↔ WIDE2 ↔ DTV** ←



Information

■ RGB SELECT modes

One of these 6 modes must be selected in order to display the following signals correctly.

AUTO ..... Select the suitable mode for the specifications of input signals as listed in the table "Computer input signals supported by this system" on page 56 of Model Information.

STILL ..... To display VESA standard signals. (Use this mode for a still image from a computer.)

MOTION ..... The video signal (from a scan converter) will be converted to RGB signals to make the picture more easily viewable. (Use this mode for a motion image from a computer.)

WIDE1 ..... When an 852 dot × 480 line signal with a horizontal frequency of 31.7kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE1.

WIDE2 ..... When an 848 dot × 480 line signal with a horizontal frequency of 31.0 kHz is input, the image may be compressed horizontally. To prevent this, set RGB SELECT to WIDE2.

DTV ..... Set this mode when watching digital broadcasting (480P).

See page 56 of Model Information for the details of the above settings.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

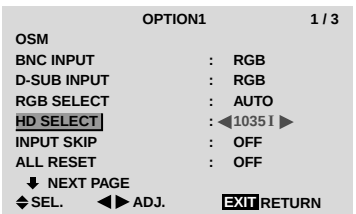
Setting high definition images to the suitable screen size

Use this procedure to set whether the number of vertical lines of the input high definition image is 1035 or 1080.

Example: Setting the "1080B" mode to "1035I"

1. On the MAIN MENU, select "OPTION1", then press the MENU/ENTER button.
   The "OPTION1" screen appears.
2. Use the ▲ and ▼ buttons to select "HD SELECT".
3. *To set the HD SELECT mode to "1035I" ...*
   Use the ◀ and ▶ buttons to select "1035I".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →1080B ↔ 1035I ↔ 1080A ←



Information

■ HD SELECT modes

These 3 modes are not displayed in correct image automatically.

1080B ..... Standard digital broadcasts

1035I ..... Japanese "High Vision" signal format

1080A ..... Special Digital broadcasts (for example : DTC100)

Setting the Input Skip

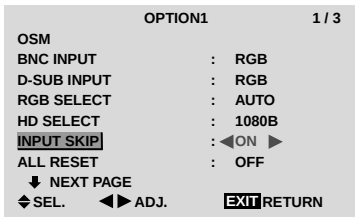
When this is ON, signals which are not present will be skipped over and only pictures whose signals are being transmitted will be displayed.

This setting is valid only for the INPUT SELECT button on the unit.

Example: Set to "ON"

1. On the MAIN MENU, select "OPTION1", then press the MENU/ENTER button.
   The "OPTION1" screen appears.
2. Use the ▲ and ▼ buttons to select "INPUT SKIP".
3. *To set the INPUT SKIP mode to "ON"...*
   Use the ◀ and ▶ buttons to select "ON".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   OFF ↔ ON



Information

■ INPUT SKIP settings

OFF ..... Regardless of the presence of the signal, scan and display all signals.

ON ..... If no input signal is present, skip that signal.

* "SETTING NOW" will appear during the input search.

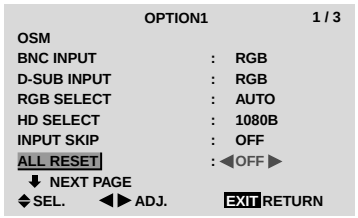
■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

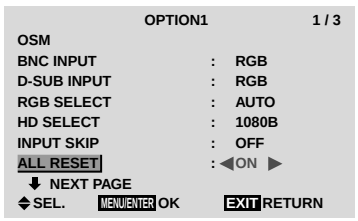
Resetting to the default values

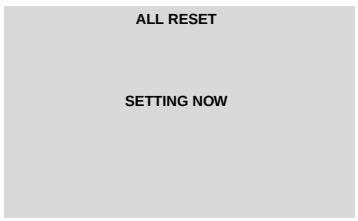
Use these operations to restore all the settings (PICTURE, AUDIO, IMAGE ADJUST, OPTION1~3, etc) to the factory default values.

1. On the MAIN MENU, select “OPTION1”, then press the MENU/ENTER button.
   The “OPTION1” screen appears.
2. Use the ▲ and ▼ buttons to select “ALL RESET”.



3. Use the ◀ and ▶ buttons to select “ON”, then press the MENU/ENTER button.





When the “SETTING NOW” screen disappears, then all the settings are restored to the default values.

Option2 Settings Menu

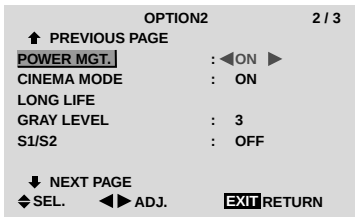
Setting the power management for computer images

This energy-saving (power management) function automatically reduces the monitor’s power consumption if no operation is performed for a certain amount of time.

Example: Turning the power management function on

Set “ADVANCED OSM” to “ON” in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select “OPTION2”, then press the MENU/ENTER button.
   The “OPTION2” screen appears.
2. Use the ▲ and ▼ buttons to select “PWR. MGT.”.
3. *To turn the power management function on ...*
   Use the ◀ and ▶ buttons to select “ON”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



Information

■ Power management function

* The power management function automatically reduces the monitor’s power consumption if the computer’s keyboard or mouse is not operated for a certain amount of time. This function can be used when using the monitor with a computer.
* If the computer’s power is not turned on or if the computer and selector tuner are not properly connected, the system is set to the off state.
* For instructions on using the computer’s power management function, refer to the computer’s operating instructions.

■ Power management settings

ON ..... In this mode the power management function is turned on.
OFF ..... In this mode the power management function is turned off.

■ Power management function and POWER/STANDBY indicator

The POWER/STANDBY indicator indicates the status of the power management function.

■ Restoring the factory default settings

Select “ALL RESET” under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

POWER/STANDBY indicator

Power management mode	POWER/ STANDBY indicator	Power management operating status	Description	Turning the picture back on
On	Green	Not activated.	Horizontal and vertical synchronizing signals are present from the computer.	Picture already on.
Off	Red	Activated.	Horizontal and/or vertical synchronizing signals are not sent from the computer.	Operate the keyboard or mouse. The picture reappears.

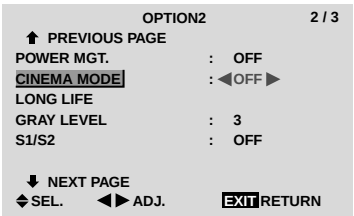
Setting the picture to suit the movie

The film image is automatically discriminated and projected in an image mode suited to the picture.
[NTSC, PAL, PAL60, 480I (60Hz), 525I (60Hz), 576I (50Hz), 625I (50Hz), 1035I (60Hz), 1080I (60Hz) only]

Example: Setting the "CINEMA MODE" to "OFF"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "CINEMA MODE".
3. *To set the CINEMA MODE to "OFF" ...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



Information

■ CINEMA MODE

ON ..... Automatic discrimination of the image and projection in cinema mode.
OFF ..... Cinema mode does not function.

■ Restoring the factory default settings

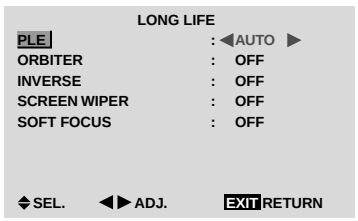
Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Reducing burn-in of the screen

The brightness of the screen, the position of the picture, positive/negative mode and screen wiper are adjusted to reduce burn-in of the screen.

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "LONG LIFE", then press the MENU/ENTER button.
   The "LONG LIFE" screen appears.



3. Set the LONG LIFE mode using ▲▼◀ and ▶ buttons.
   See below to set PLE.
   See page 42 to set ORBITER.
   See page 42 to set INVERSE.
   See page 43 to set SCREEN WIPER.
   See page 44 to set SOFT FOCUS.

Information

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

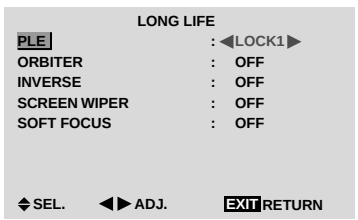
PLE (Peak Luminance Enhancement)

Use this to activate the brightness limiter.

Example: Setting "PLE" to "LOCK1"

Perform Steps 1-2 of LONG LIFE, then...

3. Use the ▲ and ▼ buttons to select "PLE".
4. Use the ◀ and ▶ buttons to select "LOCK1".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   →AUTO ↔ LOCK1 ↔ LOCK2 ↔ LOCK3←



Information

■ PLE settings

AUTO ..... The brightness of the screen is adjusted automatically to suit the picture quality.

LOCK1, 2, 3 .... Sets maximum brightness. The brightness level decreases in the order of LOCK 1, 2, 3. LOCK 3 provides minimum brightness.

ORBITER

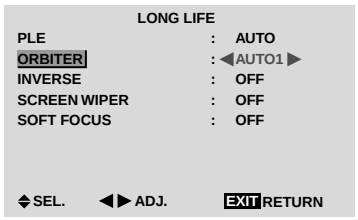
Use this to set the picture shift.

Example: Setting “ORBITER” to “AUTO1”

Perform Steps 1-2 of LONG LIFE, then...

3. Use the ▲ and ▼ buttons to select “ORBITER”.
4. Use the ◀ and ▶ buttons to select “AUTO1”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →**OFF** ↔ **AUTO1** ↔ **AUTO2** ↔ **MANUAL**←



Information

■ ORBITER settings

OFF ..... Orbiter mode does not function. This is the default setting when RGB is input.

AUTO1 ..... The picture moves around the screen intermittently, making the picture smaller. This is the default setting when a Video or a DVD/HD/DTV singnal is input. Set to “OFF” when these signals are not used.

AUTO2 ..... The picture moves around the screen intermittently, making the picture bigger.

MANUAL ..... User can adjust the orbiter function (Horizontal Dot, Vertical Line and Time) manually. See the following explanation.

* When a Video or a DVD/HD/DTV singnal is input, the AUTO1 and 2 functions will affect only the moving picture and will not make the screen smaller or bigger.

Adjust the ORBITER function manually

Set the amount of shift and the time between movement.

Example: Setting so that the picture moves 2 dots horizontally and 3 lines vertically every 3 minutes.

Perform Steps 1-3 of ORBITER, then...

4. Use the ◀ and ▶ buttons to select “MANUAL”, then press the MENU/ENTER button.
   THE “ORBITER” screen appears.
5. Adjust the items using the ▲▼◀ and ▶ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

• H-DOT

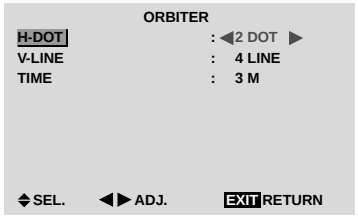
→**1 DOT** ↔ **2 DOT** ↔ **.....** ↔ **19 DOT** ↔ **20 DOT**←

• V-LINE

→**1 LINE** ↔ **2 LINE** ↔ **.....** ↔ **19 LINE** ↔ **20 LINE**←

• TIME

→**1 M** ↔ **2 M** ↔ **3 M** ↔ **4 M** ↔ **5 M**←



Information

■ ORBITER Function settings

H-DOT ..... Moves from 1 to 20 dots in the horizontal direction.

V-LINE ..... Moves from 1 to 20 lines in the vertical direction.

TIME ..... Interval of 1~5 minutes (1 horizontal dot or 1 vertical line per interval).

INVERSE

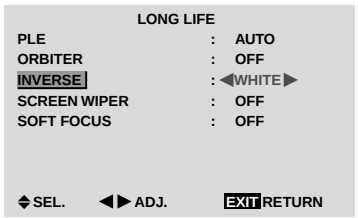
Use this to set the inverse mode or to display a white screen.

Example: Setting “INVERSE” to “WHITE”

Perform Steps 1-2 of LONG LIFE, then...

3. Use the ▲ and ▼ buttons to select “INVERSE”.
4. Use the ◀ and ▶ buttons to select “WHITE”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →**OFF** ↔ **ON** ↔ **WHITE**←



Information

■ INVERSE Settings

ON ..... The picture is displayed alternately between positive image and negative image. You can set the time by pressing the MENU/ENTER button while “ON” is set.

OFF ..... Inverse mode does not function.

WHITE ... The entire screen turns white. You can set the time by pressing the MENU/ENTER button while “ON” is set.

Setting the time for INVERSE/WHITE

Set a time duration.

Example: Setting to that the INVERSE mode starts in 2 hours and proceeds for one hour and a half.

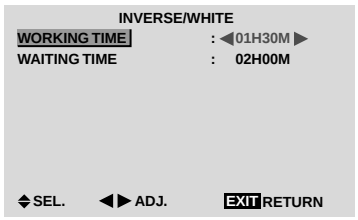
Perform Steps 1-3 of INVERSE, then...

4. Use the ◀ and ▶ buttons to select “ON”, then press the MENU/ENTER button.
   THE “INVERSE/WHITE” screen appears.
5. Adjust the time using the ▲▼◀ and ▶ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   • WORKING TIME

   →**ON** ↔ **00H03M** ↔ **00H06M** ↔ **.....** ↔ **12H42M** ↔ **12H45M**←

   • WAITING TIME

   →**00H03M** ↔ **00H06M** ↔ **00H09M** ↔ **...** ↔ **12H42M** ↔ **12H45M**←



Information

■ Setting the time

WORKING TIME ..... Set the time duration for “INVERSE/WHITE”.
When the WORKING TIME is set to “ON” the mode will stay on.

WAITING TIME ..... Set the standby time until the “INVERSE/WHITE” mode starts.

* The “WAITING TIME” can not be set when the “WORKING TIME” is ON.

* THE “WORKING TIME” and “WAITING TIME” can be set for up to 12 hours and 45 minutes in units of 3 minutes.

* Ending a WORKING TIME function, the monitor will be STAND BY.

[Example]
WORKING TIME: 01H30M
WAITING TIME: 02H00M

■ To select “ON” for the “WORKING TIME”...

Set the hours of the working time to 0H and the minutes to 0M. “ON” will be displayed.

SCREEN WIPER

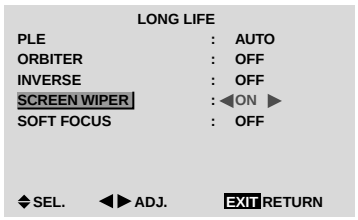
When this is set to ON, a white vertical bar moves repeatedly from the left end of the screen to the right end at a constant speed.

Example: Setting “SCREEN WIPER” to “ON”

Perform Steps 1-2 of LONG LIFE, then...

3. Use the ▲ and ▼ buttons to select “SCREEN WIPER”.
4. Use the ◀ and ▶ buttons to select “ON”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   OFF ↔ **ON**



Information

■ SCREEN WIPER

ON ..... The white vertical bar appears.
You can set the time by pressing the MENU/ENTER button while “ON” is set.

OFF ..... Screen wiper mode does not function.

Setting the time for SCREEN WIPER

Set a time duration and the speed.

Example: Setting to that the SCREEN WIPER mode starts in 30 minutes and proceeds for one hour and a half.

Perform Steps 1-3 of SCREEN WIPER, then...

4. Use the ◀ and ▶ buttons to select “ON”, then press the MENU/ENTER button.
   THE “SCREEN WIPER” screen appears.
5. Adjust the time and speed using the ▲▼◀ and ▶ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   • WORKING TIME

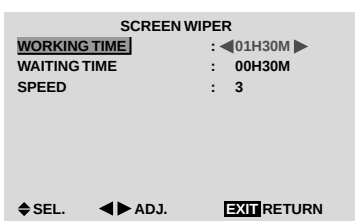
   →**ON** ↔ **00H03M** ↔ **00H06M** ↔ **.....** ↔ **12H42M** ↔ **12H45M**←

   • WAITING TIME

   →**00H03M** ↔ **00H06M** ↔ **00H09M** ↔ **...** ↔ **12H42M** ↔ **12H45M**←

   • SPEED

   →**1** ↔ **2** ↔ **3** ↔ **4** ↔ **5**←



Information

■ Setting the time

WORKING TIME ..... Set the time duration for "SCREEN WIPER".
When the WORKING TIME is set to "ON" the mode will stay on.

WAITING TIME ..... Set the standby time until the "SCREEN WIPER" mode starts.

SPEED ..... Set the moving speed for the "SCREEN WIPER". The speed decreases as the number increases.

* The "WAITING TIME" can not be set when the "WORKING TIME" is ON.
* THE "WORKING TIME" and "WAITING TIME" can be set for up to 12 hours and 45 minutes in units of 3 minutes.

SOFT FOCUS

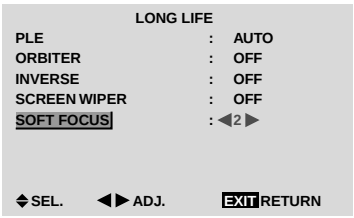
Reduces edges and softens the image.

Example: Setting "SOFT FOCUS" to "2"

Perform Steps 1-2 of LONG LIFE, then...

3. Use the ▲ and ▼ buttons to select "SOFT FOCUS".
4. Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   →**OFF** ↔ **1** ↔ **2** ↔ **3** ↔ **4**



Information

■ SOFT FOCUS settings

OFF ..... Turns the SOFT FOCUS function off.

1, 2, 3, 4 ..... Activates the SOFT FOCUS setting. The higher numbers create a softer image. "SHARPNESS" can not be adjusted on the "PICTURE" menu.

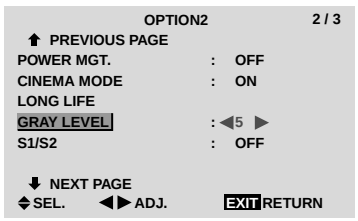
Setting the gray level for the sides of the screen

Use this procedure to set the gray level for the parts on the screen on which nothing is displayed when the screen is set to the 4:3 size.

Example: Adjusting the "GRAY LEVEL"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "GRAY LEVEL".
3. *To adjust the "GRAY LEVEL"...*
   Use the ◀ and ▶ buttons to adjust the GRAY LEVEL.



Information

■ GRAY LEVEL settings

This adjusts the brightness of the black (the gray level) for the sides of the screen.
The standard is 0 (black). The level can be adjusted from 0 to 15. The factory setting is 3 (dark gray).

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Setting the screen size for S1/S2 video input

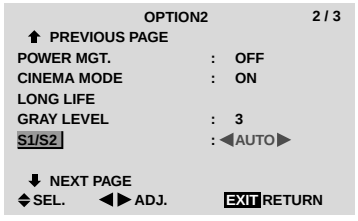
If the S-video signal contains screen size information, the image will be automatically adjusted to fit the screen when this S1/S2 is set to AUTO.
This feature is available only when an S-video signal is input via the VIDEO3 terminal.

Example: Setting the "S1/S2" to "AUTO"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "S1/S2".
3. Use the ◀ and ▶ buttons to select "AUTO".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   OFF ↔ **AUTO**



Information

■ S1/S2 settings

AUTO ..... Adjusts the screen size automatically according to the S1/S2 video signal.
OFF ..... Turns the S1/S2 function off.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

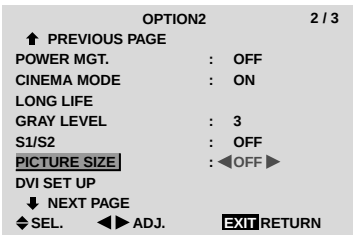
Setting the picture size for RGB input signals

Use this procedure to switch the setting to "ON" or "OFF".
* Cannot be set in some models.

Example: Setting the "PICTURE SIZE" mode to "OFF"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "PICTURE SIZE".
3. *To set PICTURE SIZE mode to "OFF"...*
   Use the ◀ and ▶ buttons to select "OFF".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   ON ↔ OFF



Information

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

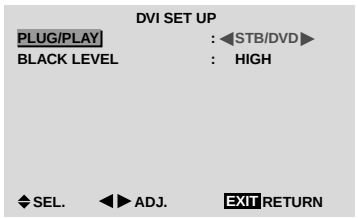
Setting the signal and black level for DVI signal

Choose the signal for the DVI connector (PC or STB/DVD) and set the black level.

Example: Setting the "PLUG/PLAY" mode to "STB/DVD"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION2", then press the MENU/ENTER button.
   The "OPTION2" screen appears.
2. Use the ▲ and ▼ buttons to select "DVI SET UP", then press the MENU/ENTER button.
   The "DVI SET UP" screen appears.
3. *To set PLUG/PLAY mode to "STB/DVD"...*
   Use the ◀ and ▶ buttons to select "STB/DVD".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   PLUG/PLAY: **PC ↔ STB/DVD**
   BLACK LEVEL: **LOW ↔ HIGH**



Information

■ PLUG/PLAY settings

PC ..... When connected to the PC signal.
BLACK LEVEL is set to "LOW" automatically.
STB/DVD ... When connected to the SET TOP BOX, DVD etc.
BLACK LEVEL is set to "HIGH" automatically.

■ BLACK LEVEL settings

LOW ..... When connected to the PC signal.
HIGH ..... When connected to the SET TOP BOX, DVD etc. Change "HIGH" into "OFF" if the black level appears gray.

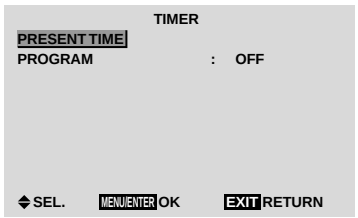
Option3 Settings Menu

Using the timer

This function sets the monitor to turn ON/OFF automatically at a set time.

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "TIMER", then press the MENU/ENTER button.
   The "TIMER" screen appears.



3. Set the TIMER using ▲▼◀ and ▶ buttons.
   See page 32 to set PRESENT TIME.
   See page 33 to set PROGRAM.

Information

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

PRESENT TIME

This sets the day of the week and present time.

Example: Setting "WEDNESDAY", "22:05"

Perform Steps 1-2 of TIMER, then...

3. Use the ▲ and ▼ buttons to select "PRESENT TIME", then press the MENU/ENTER button.
   The "PRESENT TIME" screen appears.

4. Use the ▲ and ▼ buttons to select the item, then adjust using the ◀ and ▶ buttons.

   The mode switches as follows each time the ◀ or ▶ button is pressed:

- DAYLIGHT SAVING TIME
  ON ↔ OFF
- Day
  →**SUNDAY ↔ MONDAY ↔ ..... ↔ FRIDAY ↔ SATURDAY**←
- Hour/Minutes
  →**00:00 ↔ 00:01 ↔ 00:02 ↔ ..... ↔ 23:58 ↔ 23:59**←

5. *Once the setting is completed...*
   Use the ▲ and ▼ buttons to select "SET", then press the MENU/ENTER button.
   The adjustments are stored and return to the TIMER menu.

Information

■ PRESENT TIME settings

DAYLIGHT SAVING TIME
..... Use to set DAYLIGHT SAVING TIME.
ON: The present time + 1 hour.
OFF: Cancelled

Day ..... Set the day of the week (e.g. Sunday).

Hour ..... Set the hour in the 24-hour format (range 00 to 23).

Minutes ..... Set the minutes (range 00 to 59).

* If you press the EXIT button instead of the MENU/ENTER button in step 5, the settings can not be mode.

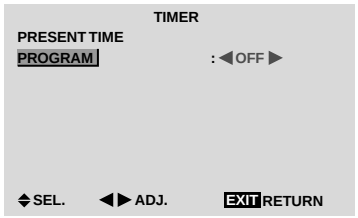
PROGRAM TIMER

This sets the day and time at which the power will be switched ON/OFF as well as the input mode.

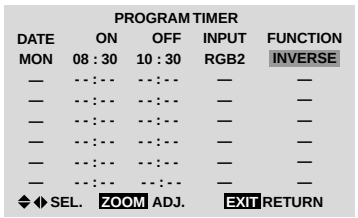
Example: Setting so that the power will be switched on at 8:30 A.M., Monday, displaying RGB2 source, and switched off at 10:30 A.M.

Perform Steps 1-2 of TIMER, then...

3. Use the ▲ and ▼ buttons to select "PROGRAM".



4. Use the ◀ and ▶ buttons to select "ON", then press the MENU/ENTER button.
   The "PROGRAM TIMER" screen appears.
5. Adjust using the ▲▼◀ and ▶ buttons and ZOOM + / − button.



The mode switches as follows each time the ZOOM + / − button is pressed:

• Date

→ — ↔ SUN ↔ MON ↔ ... ↔ SAT ↔ * ↔ *SUN ↔ *MON ↔ ... ↔ *SAT ←

• ON/OFF Hour

→ 00 ↔ 01 ↔ 02 ↔ ..... ↔ 21 ↔ 22 ↔ 23 ←

• Minute

→ 00 ↔ 01 ↔ 02 ↔ ..... ↔ 57 ↔ 58 ↔ 59 ←

• INPUT

→ — ↔ LAST ↔ VIDEO1 ↔ VIDEO2 ↔ VIDEO3 ↔ HD/DVD1 ←
→ RGB3 ↔ RGB2 ↔ RGB1 ↔ HD/DVD2 ←

• FUNCTION

→ — ↔ ORBITER ↔ INVERSE ↔ WHITE ↔ WIPER ←

Information

■ PROGRAM TIMER settings

DATE ..... Set the day of the week (e.g. Sunday).

ON (hour, minutes) .... Set the time at which the power will be turned on in the 24-hour format.

OFF (hour, minutes) ... Set the time at which the power will be turned off in the 24-hour format.

INPUT ..... Set the input mode that will be displayed when the timer is on.

FUNCTION ..... Set the LONG LIFE function.

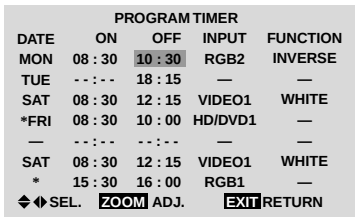
■ To reset the program

Align the cursor with the DATE field that you wish to reset, then press the CLEAR button.

■ To reset the data

Align the cursor with the field (ON/OFF/INPUT/FUNCTION) that you wish to reset, then press the CLEAR button.

■ Special characters in the PROGRAM TIMER screen


PROGRAM TIMER
DATE ON OFF INPUT FUNCTION
MON 08 : 30 10 : 30 RGB2 INVERSE
TUE --:-- 18 : 15 — —
SAT 08 : 30 12 : 15 VIDEO1 WHITE
*FRI 08 : 30 10 : 00 HD/DVD1 —
— --:-- --:-- — —
SAT 08 : 30 12 : 15 VIDEO1 WHITE
* 15 : 30 16 : 00 RGB1 —
SEL. ZOOM ADJ. EXIT RETURN

• An asterisk "*" in the DATE field

An asterisk "*" means "every". For example, "*FRI" means every Friday and "*" means everyday.

• A hyphen "-" in the ON field or OFF field

If any hyphen remains in the ON field or OFF field, the FUNCTION can not be set.

• A hyphen "-" in the FUNCTION field

A hyphen "-" means last mode (the mode that was last selected at the time the power was switched off).

Setting the power on mode

This function sets the input mode at the time the power is switched on.

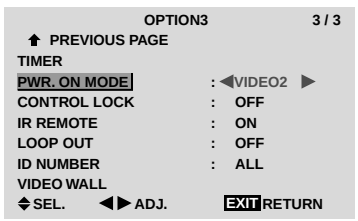
Example: Setting "VIDEO2"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "PWR. ON MODE".
3. *To set the PWR. ON MODE to "VIDEO2"...*
   Use the ◀ and ▶ buttons to select "VIDEO2".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   The available inputs depend on the setting of "BNC INPUT".

   RGB: → LAST ↔ VIDEO1 ↔ VIDEO2 ↔ VIDEO3 ←
   → RGB3 ↔ RGB2 ↔ RGB1 ↔ HD/DVD1 ←

   COMP: → LAST ↔ VIDEO1 ↔ VIDEO2 ↔ VIDEO3 ←
   → RGB3 ↔ RGB1 ↔ HD/DVD2 ↔ HD/DVD1 ←



Information

■ PWR. ON MODE settings

LAST ..... Last mode (the mode that was last selected at the time the power was switched off).
VIDEO1, 2, 3 .... VIDEO input mode.
RGB1, 2, 3 ..... RGB input mode.
HD/DVD1, 2 ..... HD/DVD input mode.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

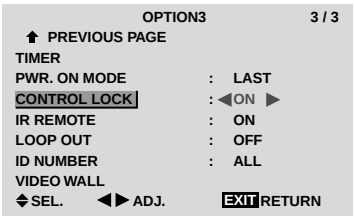
Enabling/disabling the front panel controls

This function enables/disables the front panel controls.

Example: Setting "ON"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "CONTROL LOCK".
3. *To set the CONTROL LOCK to "ON"...*
   Use the ◀ and ▶ buttons to select "ON", then press the MENU/ENTER button.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   OFF ↔ ON



Information

■ CONTROL LOCK settings

ON ..... Disables the buttons on the front panel.
OFF .... Enables the buttons on the front panel.

* Even when the CONTROL LOCK is set, the POWER switch will not be locked.

* This becomes effective when the on-screen menu goes out.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

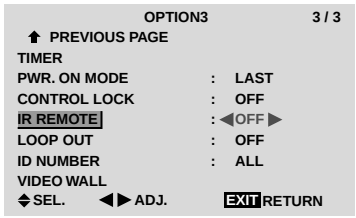
Enabling/disabling remote control wireless transmission

This function enables/disables remote control wireless transmission.

Example: Setting "OFF"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "IR REMOTE".
3. *To set the IR REMOTE to "OFF"...*
   Use the ◀ and ▶ buttons to select "OFF", then press the MENU/ENTER button.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   OFF ↔ ON



Information

■ IR REMOTE settings

ON ..... Enables remote control wireless transmission.
OFF .... Disables remote control wireless transmission. Set "OFF" to avoid unwanted control from other remote controls.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Loop Out setting

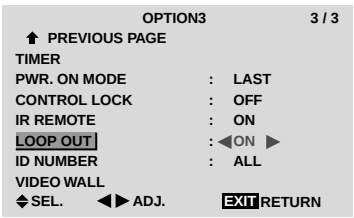
When this feature is set to ON, the received signal will be looped out.

Example: Setting "ON"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "LOOP OUT".
3. *To set the LOOP OUT to "ON"...*
   Use the ◀ and ▶ buttons to select "ON".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

OFF ↔ ON



Information

■ LOOP OUT settings

ON ..... The received signal will be looped out via PC1 terminal or VIDEO1 terminal.
OFF .... The received signal will not loop out.

* Even if LOOP OUT is ON, signals won't be sent out if POWER is being turned off.

■ To connect another display...

See page 10.

■ If the RGB/PC1 signal is present at the time the power switched on...

The RGB/PC1 input will be displayed regardless of the setting of LOOP OUT.

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

ID number setting

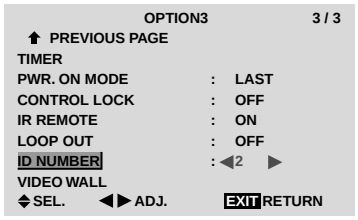
When using more than one of these displays, this function sets ID numbers so that operation of the remote control does not cause multiple monitors to operate at the same time.

Example: Setting "2"

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "ID NUMBER".
3. *To set the ID NUMBER to "2"...*
   Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ALL ↔ 1 ↔ 2 ↔ ..... ↔ 255 ↔ 256←



* **To reset back to ALL**
Press the CLEAR button.

Information

■ ID NUMBER settings

ALL ..... ID NUMBER will not be set.
1 to 256 .... ID NUMBER will be set.

■ When the ID NUMBER have been set

You can also set ID NUMBER for each remote control to operate the plasma display individually. To do so, see below.

■ Restoring the factory default settings

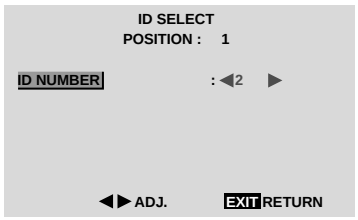
Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

To set the ID number for the remote control

Example: Setting "2"

1. Press the ID SELECT button on the remote control.
   The "ID SELECT" screen appears.
2. Use the ▲ and ▼ buttons to select "ID NUMBER".
3. *To set the ID NUMBER to "2"...*
   Use the ◀ and ▶ buttons to select "2".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ALL ↔ 1 ↔ 2 ↔ ..... ↔ 255 ↔ 256←



* **To reset back to ALL**
Press the CLEAR button.

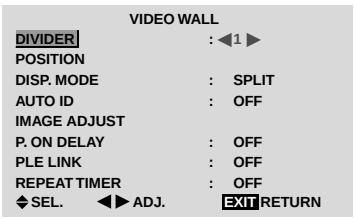
4. *Once the setting is completed...*
   Press the EXIT button to delete the ID SELECT screen.

Video Wall setting

Use this feature to configure a 2×2 or 3×3 video wall.

Set "ADVANCED OSM" to "ON" in the main menu (1/2), then perform the following operations.

1. On the MAIN MENU, select "OPTION3", then press the MENU/ENTER button.
   The "OPTION3" screen appears.
2. Use the ▲ and ▼ buttons to select "VIDEO WALL", then press the MENU/ENTER button.
   The "VIDEO WALL" screen appears.



3. Set the VIDEO WALL using ▲▼ ◀ and ▶ buttons.
   See page 36 to set DIVIDER.
   See page 36 to set POSITION.
   See page 37 to set DISP. MODE.
   See page 37 to set AUTO ID.
   See page 37 to set IMAGE ADJUST.
   See page 38 to set P. ON DELAY.
   See page 38 to set PLE LINK.
   See page 39 to set REPEAT TIMER.
4. *Once the setting is completed...*
   Press the EXIT button to return to the OPTION3 menu.

Note: *A contingency method of shutting off the electric power should be used in cases of emergency during video wall setup.*

Information

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

DIVIDER

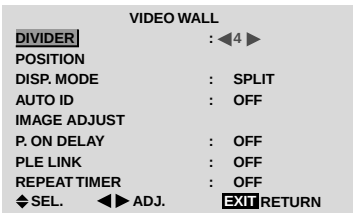
Set the 2×2 or 3×3 video wall.

Example: Setting "4"

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select "DIVIDER".
4. Use the ◀ and ▶ buttons to select "4".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ **OFF** ↔ **1** ↔ **4** ↔ **9** ←



Information

■ DIVIDER settings

OFF, 1 ..... 1 Screen (Matrix display function does not work)
4 ..... 4 Screens (2×2 video wall)
9 ..... 9 Screens (3×3 video wall)

* When you select "4" or "9", set the VIDEO WALL POSITION.

VIDEO WALL POSITION

Set the position of each display.

Example: Setting "4"

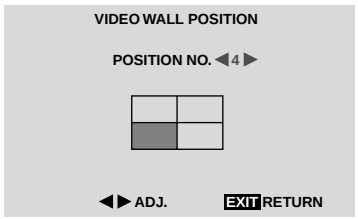
Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select "POSITION", then press the MENU/ENTER button.
   The "VIDEO WALL POSITION" screen appears.
4. Use the ◀ and ▶ buttons to select "NO. 4".
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   • 4 Screens

→ **NO. 1** ↔ **NO. 2** ↔ **NO. 3** ↔ **NO. 4** ←

   • 9 Screens

→ **NO. 7** ↔ **NO. 8** ↔ **.....** ↔ **NO. 14** ↔ **NO. 15** ←



Information

■ VIDEO WALL POSITION settings

1 Screen ..... There is no need to set POSITION.

4 Screens

NO. 1	NO. 2
NO. 4	NO. 3

9 Screens

NO. 7	NO. 8	NO. 9
NO. 10	NO. 11	NO. 12
NO. 13	NO. 14	NO. 15

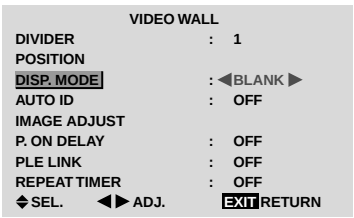
DISP. MODE

Select the screen mode from between two options (Splitting, Blanking).

Example: Setting “BLANK”

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select “DISP. MODE”.
4. Use the ◀ and ▶ buttons to select “BLANK”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   SPLIT ↔ BLANK



Information

■ DISP. MODE settings

SPLIT ..... Combines enlarged screens and creates multiple screens.

BLANK ..... Corrects misalignment of combined screen portions and creates multiple screens

AUTO ID

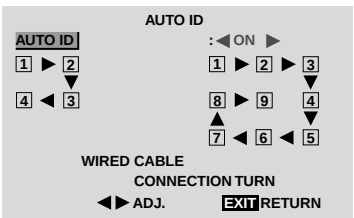
This feature automatically sets the ID numbers of multiple displays connected to each other.

Example: Setting “ON”

Set the ID number for the No. 1 display on ID NUMBER menu.

Perform Steps 1-2 of VIDEO WALL, then...

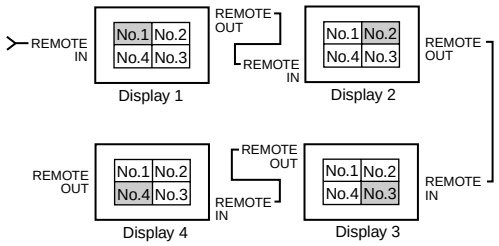
3. Use the ▲ and ▼ buttons to select “AUTO ID”.
4. Use the ◀ and ▶ buttons to select “ON”, then press the MENU/ENTER button.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   OFF ↔ ON



Information

■ AUTO ID settings

ON ..... Enables Auto ID function. In the case shown below, display 1 will be set as ID 1, display 2 as ID2, etc.



OFF .... Disables Auto ID function.

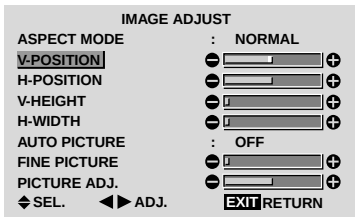
IMAGE ADJUST

The position of the image can be adjusted and flickering of the image can be corrected.

Example: Adjusting the vertical position

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select “IMAGE ADJUST”, then press the MENU/ENTER button.
   The “IMAGE ADJUST” screen appears.
4. Use the ▲ and ▼ buttons to select “V-POSITION”.



5. Adust using the ◀ and ▶ buttons.

* If neither the ◀ or ▶ button is pressed within 5 seconds, the current setting is set and the previous screen reappears.

Information

■ IMAGE ADJUST settings

These are the same functions as the IMAGE ADJUST menu on page 36.

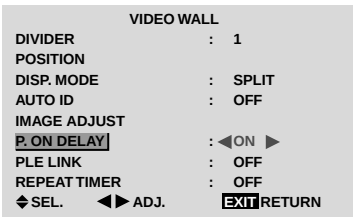
P. ON DELAY (Power on delay)

Use this function to activate power-on delay.
Turn on the AUTO ID before the following operations.

Example: Setting “ON”

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select “P. ON DELAY”.
4. Use the ◀ and ▶ buttons to select “ON”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   OFF ↔ ON



Information

■ P. ON DELAY settings

ON ..... Turns on the main power of each display after a delay time.
OFF .... Turns on the main power of all displays at the same time.

* Once this function has been set to “ON”, POWER ON/OFF button on the remote control does not function except for the No.1 monitor.
  By pressing the POWER ON button on the remote control the No.1 monitor will turn on and the others will be turned on one by one automatically.
* From the second monitor onward, neither the POWER button on the unit nor the POWER ON button on the remote control does function. However, by pressing and holding the POWER ON button for more than 3 seconds, the monitor will be turned on.

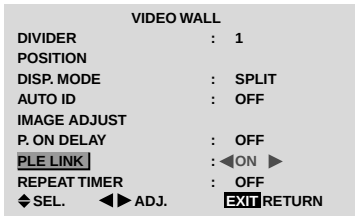
PLE LINK

Use this function to set a uniform brightness for each display.
Turn on the AUTO ID and set the DIVIDER (at 1, 4 or 9) before the following operations.

Example: Setting “ON”

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select “PLE LINK”.
4. Use the ◀ and ▶ buttons to select “ON”, then press the MENU/ENTER button.
   The mode switches as follows each time the ◀ or ▶ button is pressed:
   OFF ↔ ON

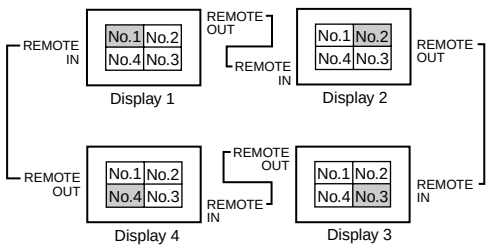


Information

■ PLE LINK settings

ON ..... Sets a uniform brightness for each screen in a video wall.
OFF .... Sets the individual screen brightness for each screen in a video wall.

* When this function is set “ON”, connect your plasma displays with the remote cable (optional) in the order of the position numbers for the 2×2 video wall. See the drawing below.
* If there are changes in the DIVIDER or POSITION, the PLE LINK will automatically turn OFF.



* With the 3×3 video wall, connect the final display to the first display the same way as with 2×2 video wall.

Note: *The remote control can be operated unless the IR REMOTE is set to “OFF”.*

REPEAT TIMER

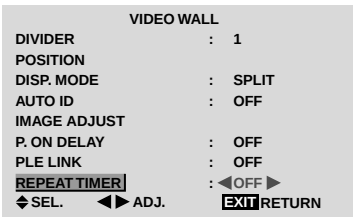
Use this to set two timers. Each timer can use the DIVIDER, SOURCE and WORK TIME functions.
Turn on the AUTO ID and set the DIVIDER (at 1, 4 or 9) before the following operations.

Example:

TIMER1...VIDEO1 will be displayed for 3 minutes.
TIMER2...RGB1 will be displayed for 6 minutes in a 2×2 video wall.

Perform Steps 1-2 of VIDEO WALL, then...

3. Use the ▲ and ▼ buttons to select "REPEAT TIMER".



4. Use the ◀ and ▶ buttons to select "ON", then press the MENU/ENTER button.
   The "REPEAT TIMER" screen appears.

5. Adust using the ▲▼ ◀ and ▶ buttons.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

• DIVIDER

→ **1** ↔ **4** ↔ **9** ←

• SOURCE
  The available sources depend on the setting of "BNC INPUT".

→ **VIDEO1** ↔ **VIDEO2** ↔ **VIDEO3** ↔ **HD/DVD1** ←
→ **RGB3** ↔ **RGB2** ↔ **RGB1** ↔ **HD/DVD2** ←

• WORK TIME

→ **00H01M** ↔ **00H02M** ↔ **00H03M** ↔ **.....** ↔ **04H14M** ↔ **04H15M** ←

Information

■ REPEAT TIMER settings

If you set both timers, Timer 1 and Timer 2 run consecutively.
In the case of the Video wall, timer No.1 can be used to control all the displays simultaneously.

* This becomes effective when the on-screen menu goes out.

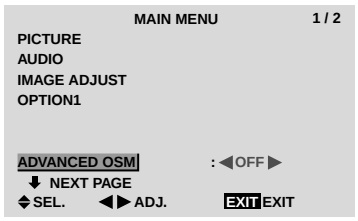
Advanced OSM Settings Menu

Setting the menu mode

This allows you to access full menu items.
When P. ON DELAY or PLE LINK is ON, this won't be turned OFF.

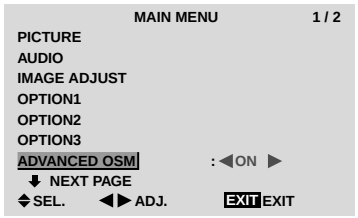
Example: Setting "ON"

1. On the MAIN MENU, select "ADVANCED OSM".



2. *To set the ADVANCED OSM to "ON"...*
   Use the ◀ and ▶ buttons to select "ON".
   The mode switches as follows each time the ◀ or ▶ button is pressed:

   OFF ↔ ON



Information

■ ADVANCED OSM settings

ON ..... All of the main menu items are available for advanced users.
OFF .... Some of the main menu items are not available (e.g. OPTION2, OPTION3).

■ Restoring the factory default settings

Select "ALL RESET" under the OPTION1 menu. Note that this also restores other settings to the factory defaults.

Language Settings Menu

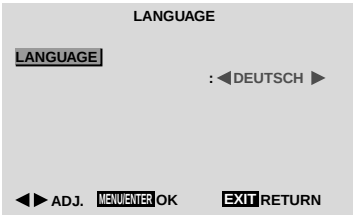
Setting the language for the menus

The menu display can be set to one of seven languages: English, German, French, Swedish, Italian, Spanish or Chinese.

Example: Setting the menu display to “DEUTSCH”

1. On the MAIN MENU, select “LANGUAGE”, then press the MENU/ENTER button.
   The “LANGUAGE” screen appears.
2. *To select “DEUTSCH” ...*
   Use the ◀ and ▶ buttons to select “ DEUTSCH”.
   The mode switches as follows each time the ◀ or ▶ buttons is pressed:

→ **ENGLISH** ↔ **DEUTSCH** ↔ **FRANÇAIS** ←
→ **中文** ↔ **SVENSKA** ↔ **ITALIANO** ↔ **ESPAÑOL** ←



Information

■ Language settings

ENGLISH ..... English
DEUTSCH ..... German
FRANÇAIS ..... French
ESPAÑOL ..... Spanish
ITALIANO ..... Italian
SVENSKA ..... Swedish
中文 ..... Chinese

Color System Settings Menu

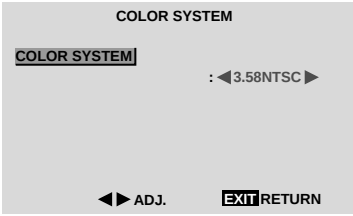
Setting the video signal format

Use these operations to set the color systems of composite video signals or Y/C input signals.

Example: Setting the color system to “3.58 NTSC”

1. On the MAIN MENU, select “COLOR SYSTEM”, then press the MENU/ENTER button.
   The “COLOR SYSTEM” screen appears.
2. *To select “ 3.58NTSC ” ...*
   Use the ◀ and ▶ buttons to select “ 3.58NTSC ”.
   The mode switches as follows each time the ◀ or ▶ button is pressed:

→ **AUTO** ↔ **3.58NTSC** ↔ **4.43NTSC** ←
→ **SECAM** ↔ **PAL-M** ↔ **PAL-N** ↔ **PAL60** ↔ **PAL** ←



Information

■ Video signal formats

Different countries use different formats for video signals. Set to the color system used in your current country.

AUTO ..... The color systems are automatically identified and the format is set accordingly.
PAL ..... This is the standard format used mainly in the United Kingdom and Germany.
SECAM ..... This is the standard format used mainly in France and Russia.
4.43 NTSC, PAL60 ..... This format is used for videos in countries using PAL and SECAM video signals.
3.58 NTSC ..... This is the standard format used mainly in the United States and Japan.
PAL-M ..... This is the standard format used mainly in Brazil.
PAL-N ..... This is the standard format used mainly in Argentina.

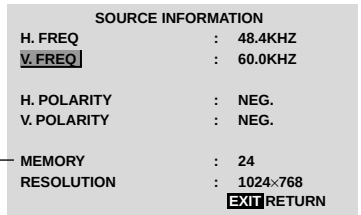
Source Information Menu

Checking the frequencies, polarities of input signals, and resolution

Use this function to check the frequencies and polarities of the signals currently being input from a computer, etc.

Press the MENU/ENTER button on the remote control to display the MAIN MENU on the screen, then...

1. On the MAIN MENU, select “SOURCE INFORMATION”, then press the MENU/ENTER button.
2. The “SOURCE INFORMATION” is displayed.



PC: MEMORY will be displayed.
Others: MODE will be displayed.

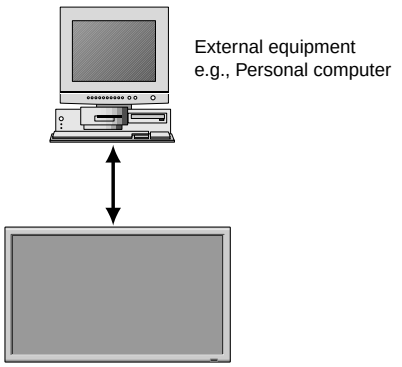
External Control

Application

These specifications cover the communications control of the plasma monitor by external equipment.

Connections

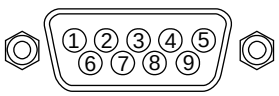
Connections are made as described below.



Connector on the plasma monitor side: EXTERNAL CONTROL connector.
Use a crossed (reverse) cable.

Type of connector: D-Sub 9-pin male

Pin No.	Pin Name
1	No Connection
2	RXD (Receive data)
3	TXD (Transmit data)
4	DTR (DTE side ready)
5	GND
6	DSR (DCE side ready)
7	RTS (Ready to send)
8	CTS (Clear to send)
9	No connection



Communication Parameters

(1) Communication system	Asynchronous
(2) Interface	RS-232C
(3) Baud rate	9600 bps
(4) Data length	8 bits
(5) Parity	Odd
(6) Stop bit	1 bit
(7) Communication code	Hex

External Control Codes (Reference)

FUNCTION		CODE DATA								
Power ON		9FH	80H	60H	4EH	00H	CDH			
OFF		9FH	80H	60H	4FH	00H	CEH			
Input Switch	Video1 (BNC)	DFH	80H	60H	47H	01H	01H	08H		
	Video2 (RCA)	DFH	80H	60H	47H	01H	02H	09H		
	Video3 (S-Video)	DFH	80H	60H	47H	01H	03H	0AH		
	DVD1/HD1 (RCA)	DFH	80H	60H	47H	01H	05H	0CH		
	DVD2/HD2 (BNC)	DFH	80H	60H	47H	01H	06H	0DH		
	RGB1 (mini D-sub 15-pin)	DFH	80H	60H	47H	01H	07H	0EH		
	RGB2 (5BNC)	DFH	80H	60H	47H	01H	08H	0FH		
	RGB3 (DVI)	DFH	80H	60H	47H	01H	0CH	13H		
Audio Mute	ON	9FH	80H	60H	3EH	00H	BDH			
	OFF	9FH	80H	60H	3FH	00H	BEH			
Picture Mode	NORMAL	DFH	80H	60H	OAH	01H	01H	CBH		
	THEAT. 1	DFH	80H	60H	OAH	01H	02H	CCH		
	THEAT. 2	DFH	80H	60H	OAH	01H	03H	CDH		
	DEFAULT	DFH	80H	60H	OAH	01H	04H	CEH		
Screen Mode	STADIUM	DFH	80H	60H	51H	01H	02H	13H		
	ZOOM	DFH	80H	60H	51H	01H	03H	14H		
	NORMAL	DFH	80H	60H	51H	01H	04H	15H		
	FULL	DFH	80H	60H	51H	01H	05H	16H		
	14 : 9	DFH	80H	60H	51H	01H	09H	1AH		
	2.35 : 1	DFH	80H	60H	51H	01H	0AH	1BH		
Auto Picture	ON	DFH	80H	60H	7FH	03H	03H	09H	00H	4DH
	OFF	DFH	80H	60H	7FH	03H	03H	09H	01H	4EH
Cinema Mode	ON	DFH	80H	60H	C1H	01H	01H	82H		
	OFF	DFH	80H	60H	C1H	01H	02H	83H		

Note: *Contact your local dealer for a full list of the External Control Codes if needed.*

Table of Signals Supported

Supported resolution

- When the screen mode is NORMAL, each signal is converted to a 1024 dots × 768 lines signal. (Except for *[2, 3, 4])
- When the screen mode is TRUE, the picture is displayed in the original resolution.
- When the screen mode is FULL, each signal is converted to a 1366 dots × 768 lines signal. (Except for *[3])

Computer input signals supported by this system

Model / Signal Type	Dots × lines	Vertical frequency (Hz)	Horizontal frequency (kHz)	Sync Polarity		Presence		Screen mode			RGB select*[5]	DVI	Memory
				Horizontal	Vertical	Horizontal	Vertical	NORMAL (4:3)	TRUE	FULL (16:9)			
	640×400	70.1	31.5	NEG	NEG	YES	YES	YES*[2]	YES	YES	– –	NO	4
IBM PC/AT*[8] compatible computers	640×480	59.9	31.5	NEG	NEG	YES	YES	YES	YES	YES	STILL	YES	5
		72.8	37.9	NEG	NEG	YES	YES	YES	YES	YES	– –	YES	7
		75.0	37.5	NEG	NEG	YES	YES	YES	YES	YES	STILL	YES	8
		85.0	43.3	NEG	NEG	YES	YES	YES	YES	YES	– –	YES	9
		100.4	51.1	NEG	NEG	YES	YES	YES	YES	YES	– –	YES	41
		120.4	61.3	NEG	NEG	YES	YES	YES	YES	YES	– –	YES	42
	848×480	60.0	31.0	POS	POS	YES	YES	– –	YES	YES	WIDE2	YES	19
	852×480*[1]	60.0	31.7	NEG	NEG	YES	YES	– –	YES	YES	WIDE1	YES	17
	800×600	56.3	35.2	POS	POS	YES	YES	YES	YES	YES	STILL	YES	11
		60.3	37.9	POS	POS	YES	YES	YES	YES	YES	STILL	YES	12
		72.2	48.1	POS	POS	YES	YES	YES	YES	YES	– –	YES	13
		75.0	46.9	POS	POS	YES	YES	YES	YES	YES	– –	YES	14
		85.1	53.7	POS	POS	YES	YES	YES	YES	YES	– –	YES	15
		99.8	63.0	POS	POS	YES	YES	YES	YES	YES	– –	YES	43
		120.0	75.7	POS	POS	YES	YES	YES	YES	YES	– –	YES	44
	1024×768	60.0	48.4	NEG	NEG	YES	YES	YES*[3]	– –	YES	STILL	YES	24
		70.1	56.5	NEG	NEG	YES	YES	YES*[3]	– –	YES	– –	YES	25
		75.0	60.0	POS	POS	YES	YES	YES*[3]	– –	YES	STILL	YES	26
		85.0	68.7	POS	POS	YES	YES	YES*[3]	– –	YES	– –	YES	27
		100.6	80.5	NEG	NEG	YES	YES	YES*[3]	– –	YES	– –	NO	45
	1152×864	75.0	67.5	POS	POS	YES	YES	YES	– –	YES	STILL	YES	51
	1280×768	56.2	45.1	POS	POS	YES	YES	– –	– –	YES	WIDE1	NO	52
		59.8	48.0	POS	NEG	YES	YES	– –	– –	YES	WIDE3	YES	80
	1360×765	60.0	47.7	POS	POS	YES	YES	– –	– –	YES*[3]	WIDE1	NO	22
	1360×768	60.0	47.7	POS	POS	YES	YES	– –	– –	YES*[3]	WIDE1	YES	22
	1376×768	59.9	48.3	NEG	POS	YES	YES	– –	– –	YES	WIDE2	YES	53
	1280×1024	60.0	64.0	POS	POS	YES	YES	YES*[4]	– –	YES	STILL	YES	29
		75.0	80.0	POS	POS	YES	YES	YES*[4]	– –	YES	– –	NO	30
		85.0	91.1	POS	POS	YES	YES	YES*[4]	– –	YES	– –	NO	40
		100.1	108.5	POS	POS	YES	YES	YES*[4]	– –	YES	– –	NO	47
	1600×1200	60.0	75.0	POS	POS	YES	YES	YES	– –	YES	– –	NO	54
		65.0	81.3	POS	POS	YES	YES	YES	– –	YES	– –	NO	55
		70.0	87.5	POS	POS	YES	YES	YES	– –	YES	– –	NO	56
		75.0	93.8	POS	POS	YES	YES	YES	– –	YES	– –	NO	57
		85.0	106.3	POS	POS	YES	YES	YES	– –	YES	– –	NO	58
Apple Macintosh*[6] *[8]	640×480	66.7	35.0	Sync on G	Sync on G	– –	– –	YES	YES	YES	– –	NO	6
	832×624	74.6	49.7	Sync on G	Sync on G	– –	– –	YES	YES	YES	– –	NO	16
	1024×768	74.9	60.2	Sync on G	Sync on G	– –	– –	YES*[3]	– –	YES	WIDE1	NO	28
	1152×870	75.1	68.7	Sync on G	Sync on G	– –	– –	YES	– –	YES	WIDE1	NO	39
Work Station (EWS4800)*[8]	1280×1024	60.0	64.6	NEG	NEG	YES	YES	YES*[4]	– –	YES	– –	YES	29
		71.2	75.1	NEG	NEG	YES	YES	YES*[4]	– –	YES	– –	NO	48
Work Station(HP)*[8]	1280×1024	72.0	78.1	– –	– –	– –	– –	YES*[4]	– –	YES	– –	NO	59
Work Station (SUN)*[8]	1152×900	66.0	61.8	C Sync	C Sync	– –	– –	YES	– –	YES	– –	NO	60
		76.0	71.7	C Sync	C Sync	– –	– –	YES	– –	YES	– –	NO	61
	1280×1024	76.1	81.1	C Sync	C Sync	– –	– –	YES*[4]	– –	YES	– –	NO	30
Work Station (SGI)	1024×768	60.0	49.7	– –	– –	– –	– –	YES*[3]	– –	YES	– –	YES	62
	1280×1024	60.0	63.9	– –	– –	– –	– –	YES*[4]	– –	YES	– –	YES	29
IDC-3000G													
PAL625P	768×576	50.0	31.4	NEG	NEG	YES	YES	YES*[7]	– –	YES*[7]	– –	NO	31
NTSC525P	640×480	59.9	31.5	NEG	NEG	YES	YES	YES*[7]	– –	YES*[7]	MOTION	NO	32

PFP™ Controller RS-232 Communications

General Information

Baud rate: 9600 (fixed)
Bits: 8
No Parity

All protocol in ASCII format

RS-232 input connector pin numbers: TxD= Pin# 2
RxD= Pin# 3
GnD= Pin# 5

Command format (single command): command value (i.e. brightness 30).
NOTE: A space (not an underscore) or comma may be used between the command and its value.

Command string format: command,command value, command etc.
(i.e. COMPOSITE,BRIGHTNESS 30,ANAMORPHIC, CARRIAGE RETURN)
NOTE: In between commands, a comma must be used; a comma or space may be used in between a command and its value. A carriage return must be used at the end of a command or string.

Other notes:

· A carriage return is required at the end of each command or string.

· For **Command** strings, a maximum of 255 characters can be used in a single string.

· If it is necessary to input multiple commands, they should all be together in a single string. Inputting commands one at a time requires a 15 second delay between commands, as the information is stored into non-volatile memory after each command.

· For values not automatically stored (see next paragraph), the command "!STORE" must be sent in order for the **PFP Controller** to keep the settings. Otherwise, the values will be considered temporary and will revert to their stored settings upon source change or power-up.

· The **Value Stored** column refers to a command that is either automatically stored or if it must be manually stored with the "!STORE" command.

· **PARAMETER** min/max refers to a function's minimum and maximum value range. Inputting values above or below their range may cause unpredictable (but not fatal) results. If **NA** appears in this column, the **NA** numerical parameter needs to be included with the command itself.

PFP™ Controller RS-232 Commands

COMMAND	PARAMETER (min/max)	Value stored?	DESCRIPTION
ON	NA	NA	Turns Controller on
OFF	NA	NA	Turns Controller off
COMPOSITE	NA	YES	Selects the Composite Video input
SVIDEO	NA	YES	Selects the S-Video Input
COMPONENT	NA	YES	Selects the Component Video input
HDCOMPONENT	NA	YES	Selects the HDTV port for Component signals
HDRGB	NA	YES	Selects the RGB HD mode, which switches the Plasma to the RGB2 (BNC) input
ANAMORPHIC	NA	YES	Selects the anamorphic aspect ratio
STANDARD	NA	YES	Selects the standard (4:3) aspect ratio
LETTERBOX	NA	YES	Selects the letterbox aspect ratio
VIRTWIDE	NA	YES	Selects the Virtual Wide aspect ratio
TINT	-127/127	NO	Sets a value for tint
COLOR	-127/127	NO	Sets a value for color
AGCCOLOR	0/1	NO	0=Disable Color AGC 1=Enable Color AGC
BRIGHTNESS	-32/32	NO	Sets a value for brightness
CONTRAST	-52/20	NO	Sets a value for contrast
AGCCONTRAST	0/1	NO	0=Disable Contrast AGC 1=Enable Contrast AGC
SHARPNESS	0/255	NO	Sets a value for sharpness
CHROMAHIGH	0/127	NO	Sets a value for high-frequency chroma edge enhancement
CHROMALOW	0/127	NO	Sets a value for low-frequency chroma edge enhancement
LUMAHIGH	0/127	NO	Sets a value for high-frequency luminance edge enhancement
LUMALOW	0/127	NO	Sets a value for low-frequency luminance edge enhancement
RGAIN	-40/30	NO	Adjusts the amount of RED in the white areas of the image
GGAIN	-40/30	NO	Adjusts the amount of GREEN in the white areas of the image
BGAIN	-40/30	NO	Adjusts the amount of BLUE in the white areas of the image
ROFFSET	-40/30	NO	Adjusts the amount of RED in the dark areas of the image
GOFFSET	-40/30	NO	Adjusts the amount of GREEN in the dark areas of the image
BOFFSET	-40/30	NO	Adjusts the amount of BLUE in the dark areas of the image

COMMAND	PARAMETER (min/max)	Value stored?	DESCRIPTION
!STORE	NA	YES	Stores the current set of values (all values) into non-volatile memory
!RESTORE	NA	YES	Restores the stored values
!FACTORY	NA	YES	Restores all values to factory default levels
!STATUS	NA	NA	Asks the Controller to provide the hardware information, current values and system status to the automation system
!RESTART	NA	NO	Restarts the Controller (same as turning it on and off)
!ECHO	NA	NO	Enables the Controller to echo back commands and values to the automation system
!NOECHO	NA	NO	Disables the Controller's character echoing
!INSTALLMODEOFF	NA	NA	Disables the Installation menu (removes it from the main menu)
!INSTALLMODEON	NA	NA	Enables the Installation menu (enables it on the main menu)

Troubleshooting

If the picture quality is poor or there is some other problem, check the adjustments, operations, etc., before requesting service.

Symptom	Checks	Remedy
Mechanical sound is heard.	• Maybe the sound from the cooling fans used to prevent over heating.	
The unit emits a crackling sound.	• Are the image and sound normal?	• If there are no abnormalities in the image and sound, the noise is caused by the cabinet reacting to changes in humidity. This will not affect performance.
Picture is disturbed. Sound is noisy. Remote control operates erroneously.	• Is a connected component set directly in front or at the side of the display?	• Leave some space between the display and the connected components.
The remote control does not work.	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
	• Is IR REMOTE set to ON?	• Set IR REMOTE OFF on OPTION3 menu.
	• Has an ID number been set for the main unit?	• Set an ID number with the ID SELECT button, or set the ID number to ALL.
Monitor's power does not turn on when the remote control's power button is pressed.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
	• Are all the monitor's indicators off?	• Press the power button on the monitor to turn on the power.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
	• Is IR REMOTE set to ON?	• Set IR REMOTE OFF.
	• Has an ID number been set for the main unit?	• Set an ID number with the ID SELECT button, or set the ID number to ALL.
Monitor does not operate when the remote control's buttons are pressed.	• Is the remote control pointed at the monitor, or is there an obstacle between the remote control and the monitor?	• Point the remote control at the monitor's remote control sensor when pressing buttons, or remove the obstacle.
	• Is direct sunlight or strong artificial light shining on the monitor's remote control sensor?	• Eliminate the light by closing curtains, pointing the light in a different direction, etc.
	• Are the remote control's batteries worn out?	• Replace both batteries with new ones.
	• The remote cable is plugged into the REMOTE IN terminal (Wired).	• Unplug the remote cable from the monitor.
The front panel buttons of the main unit do not function.	• The front panel buttons do not function during Control Lock.	• Set the Control Lock to OFF.
No sound or picture is produced.	• Is the monitor's power cord plugged into a power outlet?	• Plug the monitor's power cord into a power outlet.
Picture appears but no sound is produced.	• Is the volume set at the minimum?	• Increase the volume.
	• Is the mute mode set?	• Press the remote control's MUTE button.
	• Are the speakers properly connected?	• Connect the speakers properly.
	• Is AUDIO INPUT set correctly?	• Set AUDIO INPUT on the AUDIO menu correctly.
Poor picture with VIDEO signal input.	• Improper control setting. Local interference. Cable interconnections. Input impedance is not correct level.	• Adjust picture control as needed. Try another location for the monitor. Be sure all connections are secure.
Poor picture with RGB signal input.	• Improper control setting. Incorrect 15 PIN connector pin connections.	• Adjust picture controls as needed. Check pin assignments and connections.
Tint is poor or colors are weak.	• Are the tint and colors properly adjusted?	• Adjust the tint and color (under PICTURE).
Nothing appears on screen.	• Is the computer's power turned on?	• Turn on the computer's power.
	• Is a source connected?	• Connect source to the monitor.
	• Is the power management function in the standby or off mode?	• Operate the computer (move the mouse, etc.).
	• Is LOOP OUT set to ON?	• Set LOOP OUT OFF.
Part of picture is cut off or picture is not centered.	• Is the position adjustment appropriate?	• Adjust the IMAGE ADJUST properly.
Image is too large or too small.	• Is the screen size adjustment appropriate?	• Press the WIDE button on the remote control and adjust properly.
Picture is unstable.	• Is the computer's resolution setting appropriate?	• Set to the proper resolution.
POWER/STANDBY indicator is lighted in red.	• Horizontal and / or vertical sync signal is not present when the Intelligent Power Manager control is on.	• Check the input signal.
POWER/STANDBY indicator is blinking in red.	• The temperature inside the main unit has become too high and has activated the protector.	• Promptly switch off the power of the main unit and wait until the internal temperature drops. See*1.
POWER/STANDBY indicator is blinking in green and red, or green.	———	• Prompty switch off the power of the main unit. See *2.

* 1 Overheat Protector
  If the monitor becomes too hot, the overheat protector will be activated and the monitor will be turned off. If this happens, turn off the power to the monitor and unplug the power cord. If the room where the monitor is installed is particularly hot, move the monitor to a cooler location and wait for the monitor to cool for 60 minutes. If the problem persists, contact your Runco Authorized Dealer.

* 2 In the following case, power off the monitor immediately and contact your Runco Authorized Dealer or Runco Authorized Service Center. The monitor turns off 5 seconds after powering on and then the POWER/STANDBY indicator blinks. It indicates that the power supply circuit, plasma display panel or temperature sensor have been damaged.

PFP™ Controller Troubleshooting

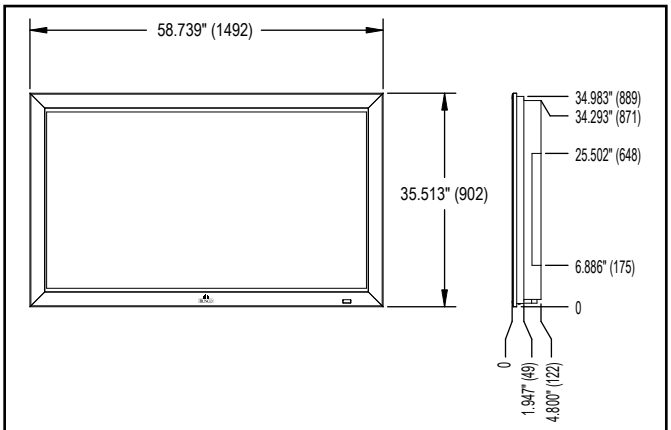
The following is a basic troubleshooting guide that can assist you in resolving typical problems may result in normal operation. If you have encountered problems that are not listed in this guide, please contact your Runco dealer for assistance.

PROBLEM	POSSIBLE CAUSE	SOLUTION
The Plasma does not turn on after initial installation. The Power LED on the front of the Controller stays yellow after the power button is pressed.	· The RJ-11 (ComLink) cable is not connected between the Controller and Plasma, or is made improperly. · The Plasma is not plugged in, or its AC outlet is not active. Look at its power LED on the front panel.	· Use a standard RJ-11 phone-type cord. Ensure it is firmly plugged into both the Controller and the Plasma. · Ensure there is good continuity in the RJ-11 cable. · Verify that the AC outlet is active, or that the Plasma is plugged in by turning on the main power switch located at the rear of the unit.
The Plasma and Controller are both on, but there is no video image on-screen.	· The Controller is on the wrong source. · The Controller is on the correct source, but the source itself is off.	· Press MENU on the Plasma's remote, and look to see which source is active (the arrow will be pointing to the active source). Select the correct source as appropriate. · Turn on the source. It is recommended that all sources be turned on first **before** the PL-61cx.

The image appears too bright, and there is a loss of definition in the brightest areas of the image.	· Contrast is set too high. · The DVD player is set for a high-level output. · The video signal has not been terminated properly somewhere in the system.	· Turn down the CONTRAST level on the Controller. Mid-range is -10; it is recommended to keep it below 0 to prevent this problem. · Set the DVD player for a nominal output (no boost or gain). · Ensure all video signals are terminated in 75 Ohms.
The image appears too 'washed out', or the darkest areas of the image appear too bright.	· Brightness is set too high. · The DVD player may be set for too high of a brightness level.	· Turn down the BRIGHTNESS level on the Controller. If possible, use a PLUGE pattern to set the brightness level properly. · Set the DVD player for a nominal output (no boost or gain).
The colors of the image appear abnormal	· The Red, Green and/or Blue outputs of the Controller or inputs to the Plasma are reversed. · The Pr and Pb inputs on the Component input on the Controller are reversed	· Check the cable connections on the back of the Controller or on the Plasma.
The Plasma will not turn on, and the power LED on the front of the Controller is blinking red or green.	· The Controller may have 'locked-up'.	· Unplug the Controller for 2 minutes; plug it back in and re-try. · Perform a system reset on the Controller and then re-try.

Plasma Monitor Specifications & Dimensions

Native Resolution:	1366 x 768
Screen Size:	61-in diagonal
Screen Aspect Ratio:	16:9
Available Aspect Ratios:	4:3, Letterbox, 16:9 Anamorphic, Stadium
Image Area:	53.2 in (1351 mm) x 29.9 in (760 mm)
DTV Compatibility:	480p, 720p, 1080i
Contrast Ratio:	1000:1
Data/Graphics Capability:	640 x 480 to 1600 x 1200
Inputs:	(1) RGB/Component (1) RGB 15-pin (1) DVI-Digital (1) Component (2) Composite (1) S-Video
Power Requirements:	120 VAC, 50/60 Hz, 540W
Operating Environment:	32º - 95º F (0º - 35º C), 20% - 80% Humidity (non-condensing)
Dimensions:	Width: 58 3/4 in. (1492 mm) Depth: 4 4/5 in. (122 mm) Height: 35 1/2 in. (902 mm) Weight: 140 lbs. (63.5 kg)
Safety Regulations:	FCC Class B, CE, C-Tick
Limited Warranty:	(3) Three years parts and labor (not including plasma glass panel) from the date of delivery to the end user. (1) One year parts and labor on the plasma glass panel from the date of delivery to the end user.



Units are in inch (mm)

The features and specifications may be subject to change without notice.

***1 HD/DVD/DTV input signals supported on this system**

480P (60 Hz)	480I (60 Hz)	525P (60 Hz)
525I (60 Hz)	576P (50 Hz)	576I (50 Hz)
625P (50 Hz)	625I (50 Hz)	720P (60 Hz)
1035I (60 Hz)	1080I (50 Hz)	1080I (60 Hz)

***2 The 5-BNC connectors are used as RGB/PC2 and HD/DVD2 input. Select one of them under "BNC INPUT".**

Supported Signals

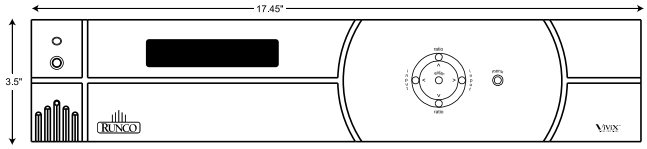
* 640 x 480p @ 59.94/60 Hz
* 1280 x 720p @ 59.94/60 Hz
* 1920 x 1080i @ 59.94/60 Hz
* 720 x 480p @ 59.94/60 Hz
* 720 x 480i @ 59.94/60 Hz

Note: In some cases a digital on the plasma monitor may not be displayed properly. The problem may not be inconsistency with standards from the source equipment (DVD, Set-top box, etc...). If you do experience such a problem please contact your Authorized Runco Dealer and also the manufacturer of the source equipmnet.

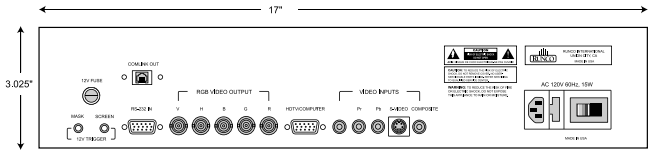
PFP™ Controller Specifications & Dimensions

Aspect Ratios:	Anamorphic, Letterbox, 4:3 (on either 16:9 or 4:3 screens)
Input Standards:	NTSC, PAL
Outputs:	Native Resolution: 768p; HD Pass-Through: Up to 1080P
Inputs:	(1) Composite, (1) S-Video, (1) Component, (1) Pass-through
Control Options:	Infrared (with discrete on/off, aspect ratio and source selection), RS-232 and Front Panel
Screen Trigger/ Masking Outputs:	(2) 12V DC, 1/8A
Bandwidth:	Video Inputs: 5.5 Mhz, Pass-Through: 100 Mhz
Power Requirements:	100 - 240V AC (auto sensing), 50/60 Hz, 15W
Operating Environment:	41° - 95° F (5° - 35° C), 0 - 90% Humidity (non-condensing)
Dimensions: (w/out feet)	Width: 17 1/2 in. (444.50 mm) Depth: 16 in. (406.40 mm) Height: 3 1/2 in. (88.90 mm) Weight: 16 lbs. (7.3 kg)
Included Accessories:	Rack mounting brackets
Regulatory Approvals:	Complies with FCC Class 'B', CE, C-tick
Limited Warranty:	(2) Two years parts and labor from the date of delivery to the end user.

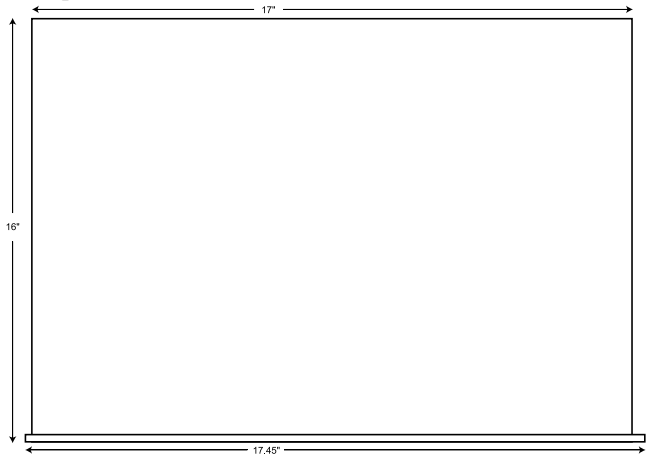
Front Panel



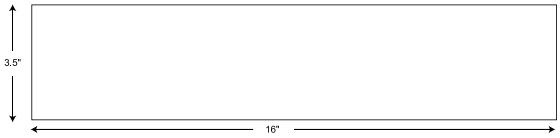
Rear Panel



Top Panel



Side Panel



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